

CAR CRAFT

AUGUST 1955 25c

**MORE
CARBURETION FOR
OLDS**



How to
"C" FRAME
Front and Rear

BRAND NEW !! THE COMPLETE STORY OF AUTOMOTIVE SPEED

An exciting story of the men who built the great Ferraris, Bugattis, Daimlers, and all of the world's speedsters . . . But the real headliners in this book are:

- WORLD'S FASTEST CARS
 - ENGINE SPECIFICATIONS
 - DESIGN CONCEPTS
- and hundreds of facts and figures
for your Automotive Library

WORLD'S FASTEST CARS

by Fred Marzoff

RECORD HOLDERS:

- 1 mph 186 HINDEN
- 3.68 mph in 1954 CUMMINGS SUPERBUGGY
- 1.08 mph by 1910 GEORGE'S BLITZ CAR
- 64 mph in 1979 THUNDER CATERING RACER

300 mph Broomer / 1997; see page 57

THE SPEED IN YOUR FUTURE

How to build hot rods and how to make them go. 1955 edition includes latest official drag strip time records.



A treasury of ideas and methods of customizing; most popular methods of restyling illustrated, with estimated costs.



How to enjoy the best in music reproduction at lowest cost; how to install your own system with simple tools.



First how-to-do-it book on skin diving. Complete guide to skin diving locations, equipment hints, etc.



How to design and build a car body from plastic; complete manual with illustrations of latest Fiberglass cars.



Specifications and photos of
all stock cars of the world,
first time under one cover.

- ☐ WORLD'S FASTEST CARS
- ☐ HOT ROD ANNUAL
- ☐ CUSTOM CARS
- ☐ HIGH FIDELITY
- ☐ SKIN DIVER'S MANUAL
- ☐ PLASTIC CARS

name.....
address.....
city.....zone.....state.....

TREND INC., 5959 Hollywood Blvd., Los Angeles 28

ARE YOU TOO OLD TO LEARN?

not at all, scientists say

New tests show that: your ability to think increases with age; your powers of deduction are greater; your judgment is better.

In the I.C.S. files are thousands of cases of men and women of every age. Their successes, their promotions, their raises prove that men and women past school age can learn!

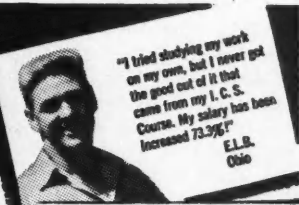
I.C.S. GIVES YOU EXPERT GUIDANCE FREE! Do you have the feeling you're "stuck" in your job? Your trained I.C.S. counselor will appraise your abilities, help you plan for the future.

IT'S NEVER TOO LATE TO GET STARTED! You study with I.C.S. at home, in your spare time. There's no interference with business or social activity. Famous I.C.S. texts make learning easy. Don't delay. Pick your field from the coupon below. And mail it today!

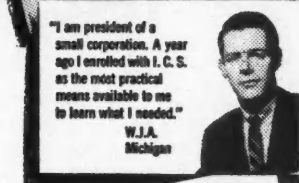
3 FREE BOOKS



36-page, pocket-size guide to advancement, a gold mine of tips on "How to Succeed." Big catalog outlining opportunities in your field of interest. Also sample lesson (Mathematics).

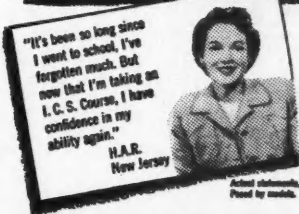


"I tried studying my work on my own, but I never got the good out of it that came from my I.C.S. Course. My salary has been increased 73.3%!"
E.L.B.
Ohio



"I am president of a small corporation. A year ago I enrolled with I.C.S. as the most practical means available to me to learn what I needed."

W.J.A.
Michigan



"It's been so long since I went to school, I've forgotten much. But now that I'm taking an I.C.S. Course, I have confidence in my ability again."

H.A.R.
New Jersey

Actual statements.
Passed by mail.

For Real Job Security—Get an I.C.S. Diploma! ... Easy-pay Plan ... I.C.S., Scranton 9, Penna.

INTERNATIONAL CORRESPONDENCE SCHOOLS

ICS

BOX 98216H, SCRANTON 9, PENNA.

(Partial list of 277 courses)

Without cost or obligation, send me "HOW TO SUCCEED" and the opportunity booklet about the field BEFORE which I have marked X (also sample lesson):

ARCHITECTURE AND BUILDING CONSTRUCTION

- ☐ Air Conditioning—Building
- ☐ Architecture
- ☐ Architectural Interior
- ☐ Building Contractor
- ☐ Building Maintenance
- ☐ Carpenter and Mill Work
- ☐ Estimating
- ☐ Heating
- ☐ Heating Contractor
- ☐ Plumbing
- ☐ Reading Arch. Blueprints

ART

- ☐ Cartooning
- ☐ Commercial Art
- ☐ Fashion Illustrating
- ☐ Magazine Illustrating
- ☐ New Card and Sign Lettering
- ☐ Sketching and Painting

AUTOMOTIVE

- ☐ Auto Body Rebuilding
- ☐ Auto Elec. Technician
- ☐ Auto-Engine Tune Up
- ☐ Automobile

AVIATION

- ☐ Aeronautical Engineering Jr.
- ☐ Aircraft & Engine Mechanics

BUSINESS

- ☐ Advertising
- ☐ Bookkeeping and Accounting
- ☐ Business Administration
- ☐ Business Correspondence
- ☐ Public Accounting
- ☐ Credit Administration
- ☐ Federal Tax
- ☐ Letter-writing Improvement
- ☐ Office Management
- ☐ Professional Secretary
- ☐ Retail Business Management
- ☐ Sales Management
- ☐ Stenographic-Secretarial
- ☐ Traffic Management
- ☐ Analytical Chemistry
- ☐ Chemical Engineering
- ☐ Glass, Lath. Technician
- ☐ General Chemistry
- ☐ Natural Gas Prod. & Trans.
- ☐ Petroleum Engineering
- ☐ Plastics
- ☐ Pulp and Paper Making

CHEMISTRY

CIVIL STRUCTURAL ENGINEERING

- ☐ Civil Engineering
- ☐ Construction Engineering
- ☐ Highway Engineering
- ☐ Building Struct. Blueprints
- ☐ Sanitary Engineering
- ☐ Structural Engineering
- ☐ Surveying and Mapping

DRAFTING

- ☐ Aircraft Drafting
- ☐ Architectural Drafting
- ☐ Electrical Drafting
- ☐ Mechanical Drafting
- ☐ Mine Surveying and Mapping
- ☐ Plumbing Drawing and Estimating
- ☐ Structural Drafting
- ☐ Electrical Engineering
- ☐ Electrical Maintenance
- ☐ Electrician ☐ Conduiting
- ☐ Linemen

HIGH SCHOOL

- ☐ Commercial ☐ Good English
- ☐ High School Subjects
- ☐ Mathematics

LEADERSHIP

- ☐ Foremanship
- ☐ Industrial Supervision
- ☐ Leadership and Organization
- ☐ Personnel Labor Relations
- ☐ Mechanical
- ☐ AND SHOP
- ☐ Gas—Electric Welding
- ☐ Heat Treatment ☐ Metallurgy
- ☐ Industrial Engineering
- ☐ Industrial Instrumentation
- ☐ Industrial Supervision
- ☐ Internal Combustion Engines
- ☐ Machine Design Drafting
- ☐ Machine Shop Inspection
- ☐ Machine Shop Practice
- ☐ Mechanical Engineering
- ☐ Quality Control
- ☐ Reading Shop Blueprints
- ☐ Refrigration
- ☐ Sheet Metal Worker
- ☐ Tool Design ☐ Toolmaking

RADIO, TELEVISION

- ☐ Industrial Electronics
- ☐ Practical Radio TV Eng'ing
- ☐ Radio and TV Servicing
- ☐ Radio Operating

TELEVISION

- ☐ Television Technician
- ☐ RAILROAD
- ☐ Air Brakes ☐ Car Inspector
- ☐ Freight Transportation
- ☐ Locomotive Engineer
- ☐ Section Foreman
- ☐ STEAM AND
- ☐ DIESEL POWER
- ☐ Diesel Engine
- ☐ Diesel—Elec. ☐ Diesel Eng'g
- ☐ Electric Light and Power
- ☐ Stationary Engines
- ☐ Stationary Steam Engineering
- ☐ TEXTILE
- ☐ Carding and Spinning
- ☐ Cotton, Brown, Woolen Mill
- ☐ Finishing and Dyeing
- ☐ Loom Filler ☐ Textile Dyeing
- ☐ Textile Eng'g ☐ Textile
- ☐ Weaving and Weaving
- ☐ MISCELLANEOUS
- ☐ Domestic Refrigeration
- ☐ Marine Engineering
- ☐ Great Wonders
- ☐ Professional Engineering
- ☐ Short Story Writing
- ☐ Typewriting

Name _____ Age _____ Home Address _____
City _____ Zone _____ State _____ Working Hours _____ A.M. to P.M. _____
Occupation _____
Canadian residents send coupon to International Correspondence Schools, Canadian, Ltd.,
Montreal, Canada. ... Special tuition rates to members of the U. S. Armed Forces.

BENCH RACIN'

with Racer Brown

ONE OF THE easiest ways to louse up the performance of an otherwise good car and engine is by the wrong selection of gears, either in the rear end, the transmission or both. For some unaccountable reason, the latest fad of the drive-in clan is 3.27's, immense rear tires and Zephyr transmission gears. From a performance standpoint for town machinery, this isn't the right approach, but maybe these guys like driving around town in low gear.

As we've mentioned before, standing start acceleration is the major factor by which the performance of a street machine is judged, and to attain this desirable goal, one must use intelligence when engine, transmission and rear end components are selected. In a machine of this type, a long duration "super-terrible" cam should yield to a short duration, fast-action "3/4" or "full race." The carburetion should be on the conservative side as well, but the correct cam is especially important.

With a good sized engine, where low speed torque is no special problem, a rear end gear ratio of from 3.7 to 3.9 is in order. In the transmission department, a 25 or 26 tooth "Z-box" or equivalent usually works out very nicely. The 25 tooth job (for the larger engines) has ratios of 2.12 in low and 1.21 in second, while the 26 tooth box has a 2.32 ratio in low and 1.32 in second. To find the overall ratio in either low or second gear, multiply the above reductions by the ring and pinion ratio. Either way, the result is a fairly close-ratio transmission with more "wind" through the low and second intermediate gears. For smaller engines, say below 275 cubic inches, a rear end gear ratio of from 4.1 to 4.5, when combined with the above gearbox ratios, will do the job. The advantage of such an arrangement is that the gears in both the transmission and rear end can be utilized more fully and the engine characteristics more readily matched to the gearing to give optimum per-

(Continued on page 66)

CAR CRAFT

Vol. 3

Published Monthly

No. 4

The Show-How Magazine

Publisher.....	R. E. Petersen
Editorial Director.....	Wally Parks
Editor.....	Dick Day
Technical Editor.....	Ray Brock
Photo Editor.....	Eric Rickman
Art Director.....	Al Isaacs
Advertising Sales.....	Tom Medley
Circulation.....	Gordon Behn

features

FORD'S ROTUNDA AUTO SHOW.....	10
32% MORE CARBURETION FOR OLDS.....	14
STRICTLY A SHOWTIMER.....	18
MICRO MIDGET POWER PLANTS.....	20
DRAGGIN' FOOLS—by Bob Greene.....	26
BODY SHOP RESTYLING.....	34
CONTROLLING THE HYDRO SHIFT.....	38
A GOIN' CUSTOM.....	42
ROCKIN' "T".....	48
GRAB BAG—'49-'50 Ford Taillights.....	56

how-to-do-it

TORCH TIPS.....	24
C-FRAMING AND DRIVESHAFT TUNNELING.....	30
PUSH RODS FOR OLDS—by Ray Brock.....	44
BUILDING A CUSTOM—Part V.....	50
THE HUBCAP TRICK—by George Barris.....	60

departments

BENCH RACIN' with Racer Brown.....	4
LETTERS.....	6
SHOPPING AROUND.....	8
WHAT'S YOUR PROBLEM?.....	62

cover

Although Dan Kilcup's red and chrome engine looks like a Rube Goldberg invention, it really serves as the potent powerplant for his '40 Ford street coupe (CAR CRAFT, March '55). Ektachrome by Peter Sukalac

CAR CRAFT, U.S. Copyright 1955 by Trend, Inc., 5959 Hollywood Blvd., Los Angeles 28, California. Entered as Second Class matter at the post office at Los Angeles, California. SUBSCRIPTION RATE: U.S., U.S. Possessions, Canada—1 year \$3.00; 2 years \$5.00. Single copy 25c. All other countries—1 year \$4.00, 2 years \$7.00. CHANGE OF ADDRESS: Three weeks' notice is required. When requesting a change, please name magazine and either furnish an address imprint from a recent issue, or state exactly how label is addressed. Change cannot be made without the old, as well as the new, address. ADVERTISING: Closes 65 days preceding deadline (see SRDS). Eastern office, 3107 Book Bldg., Detroit 26, Mich. Phone WQodward 3-8660. CONTRIBUTIONS: Manuscripts, photographs, drawings not returned unless accompanied by self-addressed stamped envelope. No responsibility assumed for unsolicited material.

Words From The Editor

WE HERE at CAR CRAFT are continually striving to give you, the reader, features that are basically informative from all angles as well as just plain reading fun. This month starts a new gimmick that we have been working on for the last few months, and now, with a backlog of material, the curtain goes up. We feel sure that you will enjoy it and within a short time will be writing in asking for certain items to appear—*this we will welcome with open arms.*

It's a gimmick on customizing cars that has a completely different approach. Every month we select a car to be customized. By this we mean any car, any model and any year. Also each month, a custom body shop is selected to do the actual restyling work, assuring you that the restyling ideas are authentic, ones that would be feasible to perform. The rules compel the shop to list labor prices for each innovation, and parts prices are also present. The parts prices may fluctuate slightly across the country. The body shops that are already on the list for work spread across the nation. To give you an idea of some of them, check the following: Hamlin's Auto Shop, Bridgeville, Pennsylvania; Barris Brothers Shop, Lynwood, California; Valley

Custom, Burbank, California; George Cerny's Shop, Compton, California; Styler's Shop, San Diego, California; Bailon's Shop, Oakland, California; and several more shops that we haven't the space to list. Now, for the first time, you will have the opportunity to see your favorite shop in action, expressing their original ideas for which they have become famous.

The actual article will concern itself with one car per month. The shops will work from 8 x 10 photographs, which will be returned to this office where our very capable assistant Art Director, Don Fell, will make a scaled rendering of the restyled car. Appearing with the artist's rendering will be a photograph showing the car as it looks in stock form.

The initial idea stems from you, the reader. Your many letters asking for custom ideas proved to be the persuader, so this is *your baby*. The staff around the office is already keyed up and waiting for the next installment and I'm sure you will be too. The articles will make a swell backlog for personal reference and be very valuable for the body shops. Let us hear on what make, model and year you'd like to see customized. Story appears on page 39.

CAR CRAFT magazine

5959 Hollywood Blvd., Los Angeles 28, Calif.

Please send me CAR CRAFT for the next

- ☐ 12 months @ \$3.00
- ☐ 24 months @ \$5.00

Enclosed

- ☐ cash
- ☐ check
- ☐ money order

name _____

address _____

city _____

zone _____ state _____



LETTERS

SAFETY COMES FIRST

Dear Mr. Monroe:

For the safety of the fellows who are starting to build a new modified stock car, allow me a couple of words.

In your second part of "Building a Sportsman, or Modified Stock," the picture of the steering wheel shows a big mistake—never use a "bango" type steering wheel—imagine what happens to a guy's face and neck when they break. Try a '35 Ford.

Another thing you are right about, but just one comment: weld the seat to the frame, but the safety belt, too. I've had roll bars and braces knocked out and if my belt had been fastened to them, three guesses what I would've looked like.

From a guy who's been piling them up for a few years, let's try to run a safe car. Your book is tops. Thanks.

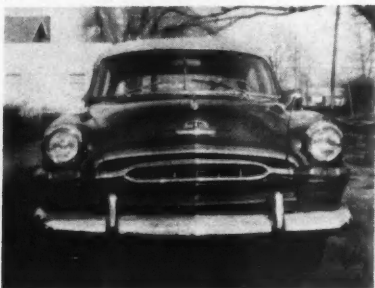
Stubby Balcom
Garfield, N.J.

The bango type steering wheel is evidently considered dangerous, as some associations prohibit their use. Mine will be replaced with another type. Glad you brought this up. As I stated in earlier issues, unless the welder can consistently make welds which are stronger than the metal being welded, some other method should be used. As a rule it would be better to bolt the safety belt to the frame using large washers or other reinforcement to prevent the bolt pulling through the frame in case it is weakened by rust. Don't forget to secure the nut with a cotter pin.—Ed Monroe, Author.

PONTIAC GRILLE FOR PLYMOUTH

Dear Sirs:

In one of your recent magazines you showed some cars with '54 Pontiac grille in them, but you only presented a few of the various car makes. So I'm enclosing a picture of my '53 Plymouth with a '54 Pon-



tiac grille. I thought you might like to publish it to show that you can install them in Plymouths. Since this picture was taken I have some different headlight rims which french in my headlights, plus a pair of half-moons for the seal beams, which make it look a lot better, I think.

Very truly yours,
Carl Williams
Detroit 19, Michigan

ROD BENDERS

Dear Sirs:

I have been reading and enjoying your magazine since the first issue. It has come in handy many times.

Recently you ran articles on how-to-make custom fender skirts. As not all people have the same make car, and as your articles feature a specific car and custom skirt for that car, I would like very much to see an article on how to make custom skirts for *any* car.

Some of my friends and I have made custom skirts from tops off old cars and they turn out very good. In fact, some of the guys are making them to order for others and selling them at a good price.

These skirts are made by drawing a pattern and then transferring it to the top. The skirt is then cut out and the edges rolled, brazed, and leaded. It's important that you place the pattern on the top so that you get the bulge and curve that you want.

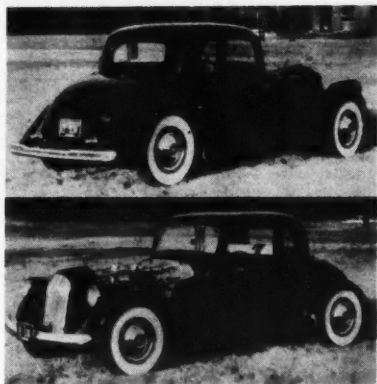
Yours truly,
Roland Elkins
Rod Benders of Pontiac
Lake Orion, Michigan

Let's have some photos on making the custom fender skirts, Roland. Possibly a good number of our readers would be interested in your how-to-do-it story. Thanks.—Ed.

BILL'S JEWEL

Dear Sirs:

I am a regular reader of CAR CRAFT and really enjoy it. I've seen lots of little jewels in your magazine and believe mine will match some of the best.



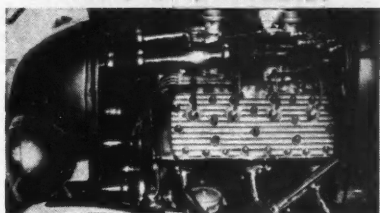
She's a '34 Ford coupe with a Pontiac grille, '40 Chevy head and taillights. Her mill is '48 Merc.

Bill Ault
Columbus, Ind.



IF YOU "EAT, SLEEP
AND LIVE" CARS...

TURN YOUR HOBBY INTO A CAREER!



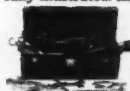
Get America's Big-time, Big-future

AUTO MECHANICS & DIESEL COURSE at home in your spare time!

Los Angeles' National Schools, America's automotive Technical Trade School since 1905, now brings its famous resident Shops and Faculty direct to you at home—to prepare you to earn more money, with job security, in today's fast-moving, opportunity-filled Auto Mechanics Industry! Get your home training from the "Car Capital of The World"—America's most auto-minded city, center of Hot Rod and Sports Car activity! Mail coupon right now!

"SHOP-METHOD" HOME TRAINING!

YOU MASTER ALL PHASES, INCLUDING DIESEL! All lessons fully illustrated. Latest equipment covered.



THIS SET OF LIFETIME TOOLS IS YOURS! Also all-metal tool box. Part of your course, yours to keep. **EARN WHILE YOU LEARN!** We show you how to start Spare Time Earnings soon after enrollment.

ATTENTION MEN OF DRAFT AGE. Learn how you can achieve higher rating and pay. Mail coupon at once!

APPROVED FOR G. I. TRAINING. Both Home Study & Resident Courses. Free help with technical and personal problems—Job Placement Service.



Send for FREE FACT-BOOK AND SAMPLE LESSON!

NOW! 2 offices to serve you faster!
Mail coupon today to one nearest you!

NATIONAL SCHOOLS

Technical Trade Training Since 1905

LOS ANGELES 37, CALIFORNIA

IN CANADA: 811 West Hastings Street, Vancouver, B. C.

MAIL NOW TO OFFICE NEAREST YOU!

(mail in envelope or paste on postal card)

NATIONAL SCHOOLS, Dept. D1E-85

4000 S. FIGUEROA STREET
LOS ANGELES 37, CALIF.

OR 323 WEST POLK STREET
CHICAGO 7, ILLINOIS

Send **FREE** Auto-Mechanics Book and Sample Lesson.
No obligation, no salesman will call.

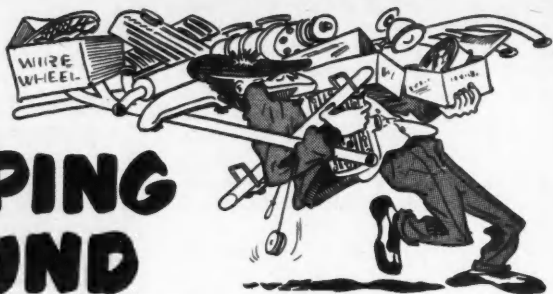
NAME _____ BIRTHDAY _____ 19 _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

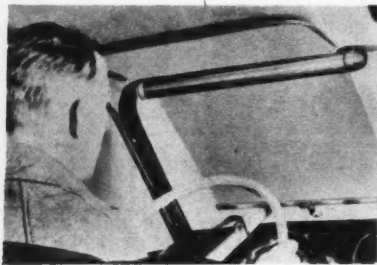
☐ Check if interested **ONLY** in Resident School Training at Los Angeles.
VETERANS: Give Date of Discharge _____

SHOPPING AROUND



PASTE SOLDER

Swif, new type of solder with Flux in paste form is real 50/50 tin-lead solder which anyone can use. The solder is applied in paste form from tube to the surface to be soldered. The adjacent surfaces are then heated. For small jobs, such as soldering wires, etc., the heat from an ordinary match directly on the solder is sufficient to do a perfect job. For larger jobs the use of a torch or electric iron is recommended. Swif sells for 59c, provides enough solder to make hundreds of permanent soldered connections.

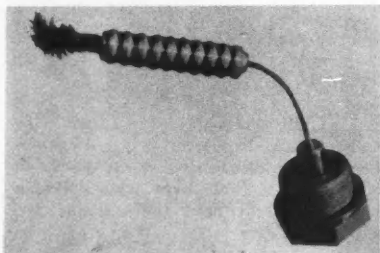


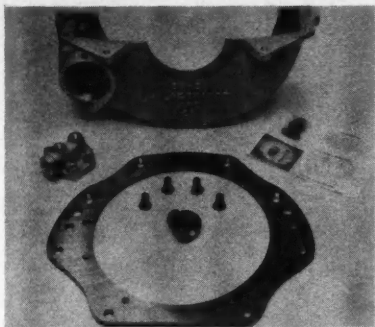
ROLL-O-TINT SUNSHIELD

The new Rol-O-Tint auto and truck sunshield provides glareless driving comfort in brightest sunshine and eliminates eyestrain. When needed it is easily drawn down into position over the windshield and fastened by a clip on the shade bar to the lower windshield molding. The Rol-O-Tint sunshield can also be installed on the passenger side of the car. Rol-O-Tint sunshield costs \$4.95. Write: SolRol Mfg. Co., 4404 So. Western Ave., Chicago, Ill.

MAGNAPLUG

MagnaPlug will increase engine life by virtual elimination of engine acids and metallic abrasion through use of a special crankcase drain plug. It consists of an element of special turned magnesium to neutralize engine acids, combined with a permanent Alnico magnet to capture metallic particles circulating in the lubrication system. Price, \$2.95. Write: Engine Products Mfg. Co., 5801 E. Beverly, Los Angeles, Calif.

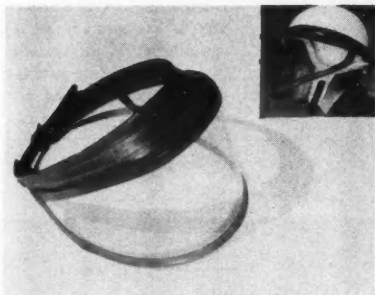




OLDS V8 ADAPTOR KIT

This kit is designed to eliminate the steering problems usually encountered when installing an Olds engine in '32-'48 Fords and '39-'50 Mercs. Steel adaptor plate is Blanchard ground for accurate fit. Aluminum bell housing moves starter motor to right side of engine to give steering gear box clearance. By-pass plate is furnished in kit to facilitate relocation of Olds oil filter. Price: \$66.60.

Write: Moon Automotive, 10935 S. Bloomfield, Norwalk, California.



COMPETITION VISOR

A new full contoured face protection visor for competition uses is now being manufactured by Scott Manufacturing Company. The visor is made from durable Vinylite plastic. The flexible frame encasing visor is made of genuine leather. The visor will fit and adjust to any full protection crash helmet. It will not flex or blow off at speeds. Price is \$7.50 F.O.B. Write: Scott Manufacturing Company, 1325 State St., San Diego 1, California.

**Rush
Coupon for
FREE**

**1955
Catalog
of**

**AUTO
PARTS
and
Accessories**

148 PAGES **Saves You UP TO 50%**

50,000 ITEMS Get your FREE copy now... this is the only complete buying guide to everything you need for your car, truck, custom styled car or hot rod. You'll save up to 50% buying-by-mail from Whitney! Choose from thousands of hard-to-find items... new and replacement equipment for cars from 1920 to 1955. See newest Hollywood accessories not offered in stores; high speed and power parts, custom styling equipment... all at lowest prices! Guaranteed satisfaction or money back. Fast shipment. Mail coupon for free copy now.

EXTRA! Rush coupon and get valuable Safety Chart FREE with catalog. Please enclose 25c to help pay catalog mailing and handling costs. We will credit 25c on your first order for \$5.00 or more. Mail coupon NOW!

JUST A FEW OF THE 50,000 ITEMS LISTED IN THIS BIG NEW CATALOG

Auto radios	Transmissions
Hi-Speed Equipment	Custom Style Accos.
Mufflers, pipes	Tires, Tubes
Engines, parts	Ignition Parts



**J. C. WHITNEY
P.O. BOX 1917
C-8 Archer
Ave., Chicago
16, Illinois**

J. C. Whitney & Co., 1917 C-8 Archer Avenue, Chicago 16, Illinois

Rush giant 1955 catalog of auto parts and accessories at sale prices. I enclose 25c to cover part of mailing and handling cost, which will be credit to me on my first \$5.00-or-more order.

Name.....

Address.....

City.....

State.....

Ford Motor Company recognize
talent when they see it . . .
and they found it in
their own back yard



Photos by Joe Farkas

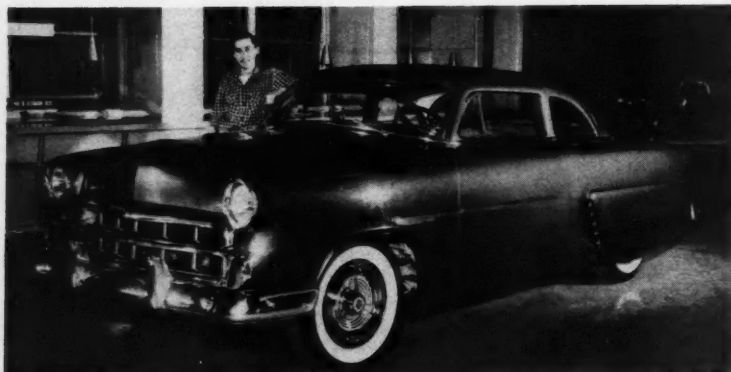
A HOT ROD SHOW in the Ford Rotunda?
Go on—who are you tryin' to kid?

Despite this type of reaction, the Michigan Hot Rod Association is credited with pulling 61,000 people into this fabulous Detroit

landmark recently when they linked hands with the Ford Motor Company in a 12-day showing of eighteen individual hot rods and custom cars of Ford origin.

The unique display of cooperation set a precedent in the automotive world and created such an impression on the sponsoring motor-ing pioneers that another show may be arranged for the coming year. In fact, indications are that it may become an annual event.

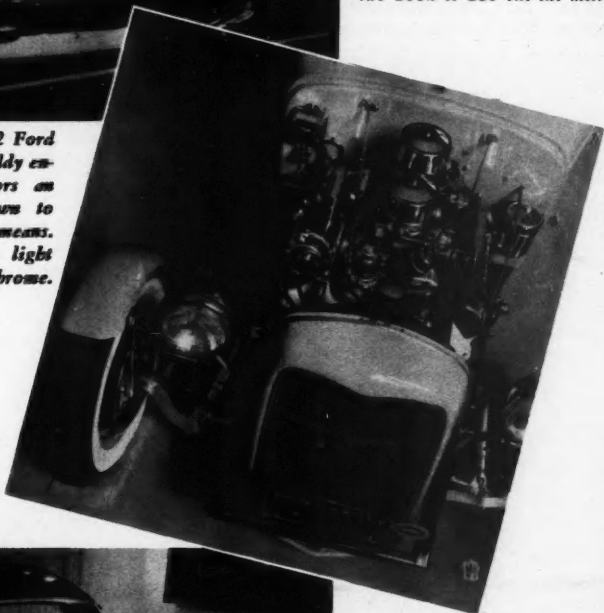
(Continued on page 12)





Bill Pagett's '50 Ford club coupe was show stopper with its two-tone paint job of lilac pearl and burgundy. It features late Pontiac side trim, floating grille bars, original headlight styling, full fender air scoop skirts and has had a large amount of trim removed and body seams filled. Under the hood is 286 cu. in. mill.

Tommy Foster's '32 Ford with 331 cu. in. Caddy engine gave spectators an idea of what down to earth hot rodding means. Car is painted a light blue with lots of chrome.



FAR LEFT: '52 Merc belonging to Ron Freshman featured major body restyling. Top was chopped 4 1/2 inches.

Nello Tacconelli's '52 Merc custom was show sensation. '53 Lincoln taillights have been installed and majority of trim removed. Color is indigo. Note the fender skirts.

(Continued from page 10)

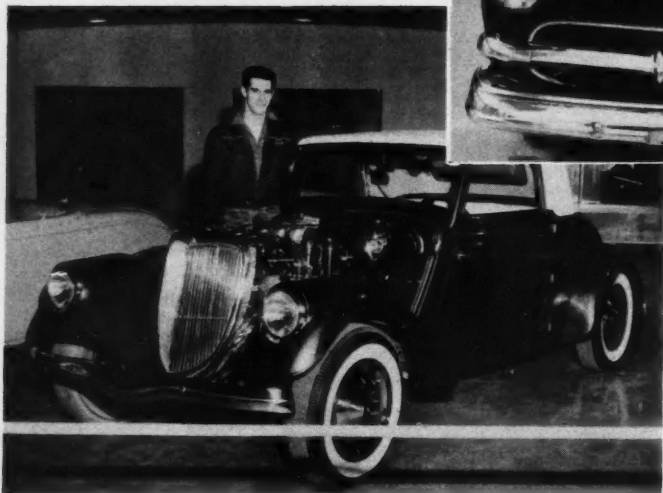
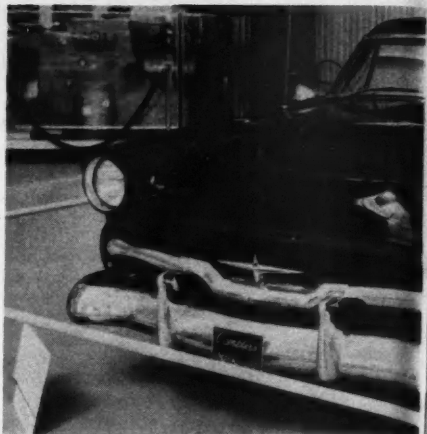
Ford officials were pleased because there was a preponderance of young people (both sexes) as compared to more confined groups of some of their previous shows. Incidentally, it is interesting to note that some of the top automotive stylists were counted among the most engrossed spectators.

There is really nothing unusual in this official interest in Ford customs, as the late Henry Ford was one of the country's foremost backers of youthful craftsmen; witness his still-continued Industrial Arts Award, where high school students from all over the country match handicrafts for scholarships.

We think that you will agree that his faith in American youth was well founded, if the workmanship shown on these pages is indicative of their spirit!

RIGHT: *The front of Jack Elder's Ford is just as unique in style as that of the rear. Notice the air scoop built into the hood.*

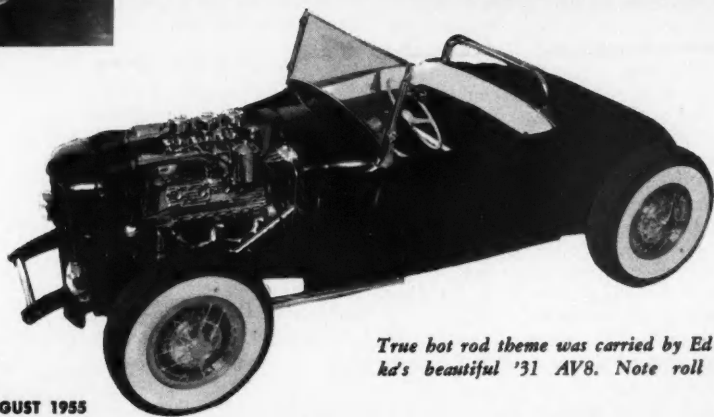
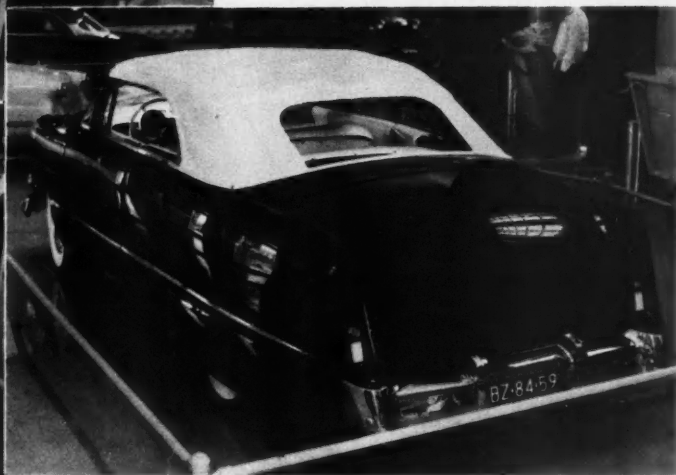
Martin Ribits' cute '34 Ford convertible coupe made hit with the younger set. The powerplant consists of a 296 cu. in. Merc. Headlight treatment is very good. Running boards are removed, fenders faired into body.





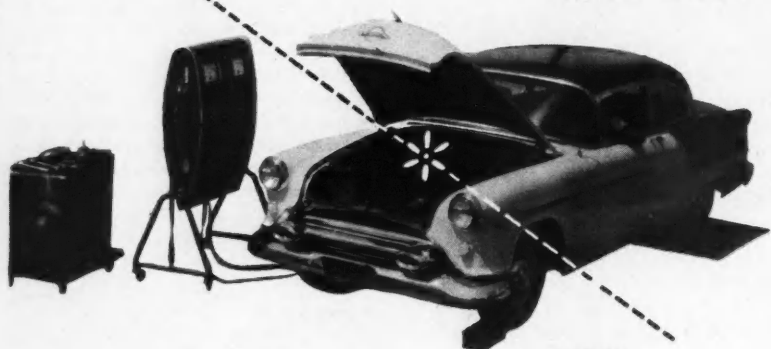
LEFT: Charley and Frank Gilardane's '53 Ford shows novel treatment in grille styling. The top has been chopped 2 inches. Headlights have been lipped and a large air-scoop is built into the front section of the hood. The exterior color is jet black.

BELOW: Jack Elder's '51 Ford convert. had 'em dropping by the wayside. Taillights are clever in every detail. Large amount of trim has been removed. Rear bumper is late Merc. With top and interior white, black exterior makes sharp contrast. Car is valued at \$5000.



True hot rod theme was carried by Ed Zilk's beautiful '31 AV8. Note roll bar.

32% More Carburetion for Late Olds



By Ray Brock

STOCK CARBURETOR SWAP

WE KEEP our eyes open at all times for the purpose of locating some really interesting and worthwhile bits of information to pass on to you, the reader. Being the owner of a 1954 Olds Super 88, we naturally take more than casual interest in anything that pertains to late Oldsmobiles and, it just so happens, we have run across a good speed secret for owners of '54-'55 Oldsmobiles.

When checked on a chassis dynamometer, stock, late model ('54-'55) Oldsmobiles develop maximum horsepower at approximately 3600 rpm or at 65 mph in Hydra-Matic third gear with a 3.23 differential. At this speed, full throttle with maximum power, manifold vacuum gauges show $2\frac{1}{2}$ inches of mercury. This would indicate that the engine is under-carbureted at full throttle, high rpm's. Actually, nearly all U.S. production automobiles are in this class, since it insures good volumetric efficiency in normal operating ranges.

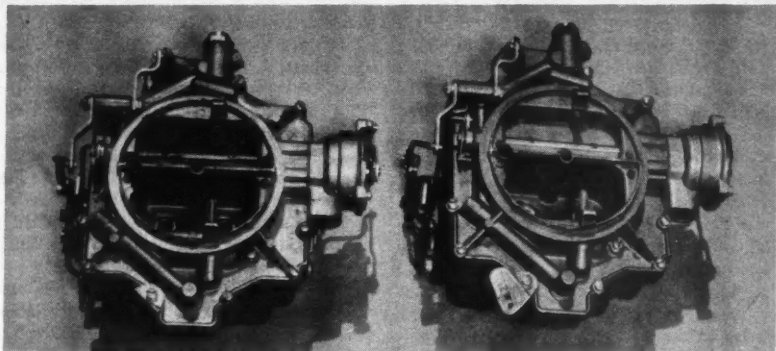
Several months ago, we heard from one Olds owner who had bored out the secondary venturi on his '54 carburetor a little and came up with extra horsepower in the upper

ranges. Also, he did not lose any efficiency or power at normal cruising speeds because the primary venturii were untouched and the engine draws from the primary side of the carburetor on all but maximum power demands. The only drawbacks to boring out the '54-'55 Oldsmobile secondary venturii are the limits imposed by the thickness of the carburetor casting and the difficult job of accurately boring the venturii.

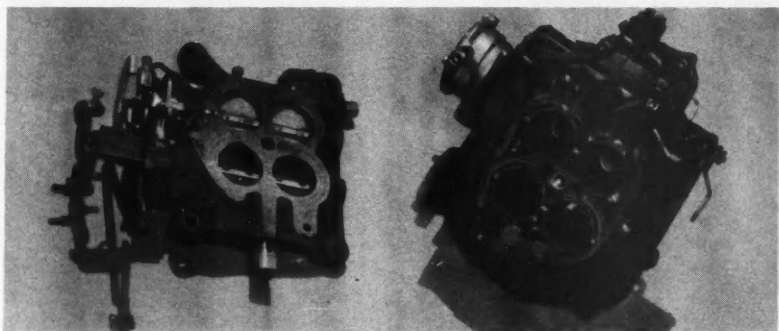
We recently became acquainted with another approach to the extra carburetion problem which is much faster to perform, produces more horsepower and looks completely stock. The stock appearances make it ideally suited for application to late Olds running in the stock class at the local drag strip. Cheaters, take note. This carburetor is the Rochester model number 7007970, which is standard on 1955 Cadillac engines.

The physical specifications of this carburetor when compared to the stock '54 and '55 Olds carburetors are as follows: Primary venturi diameter: Cad, 1"; Olds, $1\frac{1}{4}$ ". Second-

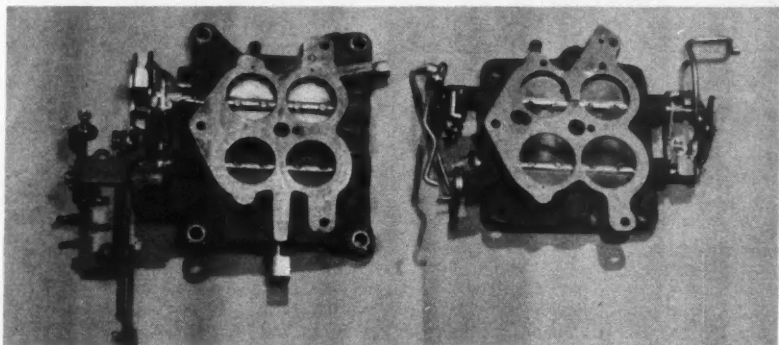
(Continued on page 16)



Late Olds carburetor at left has body casting identical to the '55 Cadillac carburetor at right. Only visible differences are the throttle base and automatic choke linkage setup.



Oldsmobile cast iron throttle base is taken loose from main carburetor body by removing four screws through base and disconnecting rods to fast idle cam and accelerating pump.



Olds throttle base at left and Cadillac at right. Olds has wider spread bolt pattern and all linkage on one side only. No modifications are necessary to make changeover.

CARBURETION SWAP continued

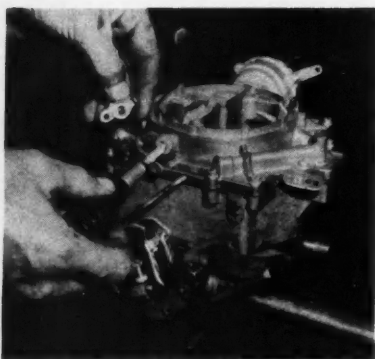
ary venturi diameter: Cad, $1\frac{3}{16}$ "; Olds, $\frac{57}{64}$ ". Total carburetor venturi area: Cad, 3.79 square inches; Olds, 2.868 square inches. This boils down to the simple fact that the Cad carburetor has .922 square inches more area than the '54 or '55 Olds carburetor, or a 32% increase in total venturi area.

The car which we used as a testing laboratory was a 1954 Olds 2-door sedan with 23,000 miles on the odometer and in general good condition. This car was selected because it was well broken in and had always seemed to be a good running car. The only non-stock items on the car were dual exhausts. After a tuneup to factory specifications, the Olds was

and the results recorded. These results will be found elsewhere in the article.

The next step was to install the '55 Cadillac carburetor. This operation was very simple. First, the throttle base was removed from the Olds carburetor. This must be used since the Olds bolt pattern differs from the Cad pattern. The Olds throttle base was substituted for the base on the Cad carburetor. The base gasket of either carburetor fits without alteration.

Step number two requires a slight change in the automatic choke linkage. The small lever on the left side of the carburetor which actuates the rod leading to the fast idle cam must either be drilled out to accept the larger Olds linkage rod or, simpler yet, just replace this lever with the one off the Olds carburetor.



Fast idle rod on Olds is bigger than Cad so fastest means of adaptation is to substitute the two levers from end of Olds choke shaft.



The bakelite thermostat spring cover for the automatic choke is the final change to be made. Olds cover, left, replaces Cad cover.

placed on a chassis dyno and checked for maximum road horsepower without air cleaner.

The Hydra-Matic transmission was locked in Super range and then tested at 65 and 75 mph. The higher speed was used because that is where the extra carburetion would be needed. The car had been driven several miles prior to being placed on the dyno so that all moving parts would be thoroughly warmed. The car was tested until identical readings were made on three consecutive runs. These readings were 133 HP at 65 mph in third gear and 132 HP at 75 mph in third gear. After these tests, the car was put through a series of acceleration tests against a stop watch

The other change to be made is the bakelite cover and thermostat spring assembly for the automatic choke. Install the Olds assembly in place of the Cad unit and the carburetor is ready for use.

After the carburetor was installed on the car, the testing procedure used on the stock setup was repeated. The results obtained far exceeded expectations, as the dyno meter indicated 156 HP at 65 mph in third gear and 150 HP at 75 mph in third gear. The stock Cadillac jets had been untouched for this test and were .049 primary jets, .073 secondary jets. A slight hesitation on acceleration indicated that the mixture might be rich,

so a jet change seemed in order.

For the third test, one-stage lean primary jets (.048) were installed and the standard primary jets which came with the carburetor (.049) were drilled out to .070 for use in the secondary, since no jets leaner than .073 were available for the secondary. Leaning out the carburetor proved to solve the hesitation problem on the takeoff and also brought the maximum rear wheel horsepower up to 164 HP at 65 mph and 158 HP at 75 mph in third gear. Acceleration figures showed a decided improvement.

We did not have any opportunities for complete and accurate tests on top speed but, had we been able to do so, some pretty convincing times may have resulted. The most

noticeable change noted in the seat of the pants was from 65 to 75 mph in third gear, which means that the Cad carburetor starts to percolate in the higher rpm range.

That is the word on the '54 or '55 Olds equipped with the '55 Cad carburetor. The list price on these four-throated Rochesters is up around \$65, but most guys seem to have a means of getting a slight discount. Even if you have to go the full list price, where else can you pick up that much horsepower so cheap and so fast?

ACCELERATION TESTS

CARBURETOR USED	AVERAGE, FOUR RUNS	
	0-80 MPH	60-80 MPH
Stock Olds	17.9 secs.	7.85 secs.
Stock Cad	17.7 secs.	7.6 secs.
Cad, lean jets	17.3 secs.	7.3 secs.



The 1955 Cadillac carburetor body on a 1954 Oldsmobile base being installed on a '54 Olds engine. All vacuum lines, linkage, etc., fit perfectly. No carburetor difference can be seen.

STRICTLY A SHOW TIMER

With an auto show diet,
Ray Moore's custom Ford thrives
on glittering trophies and blue ribbons

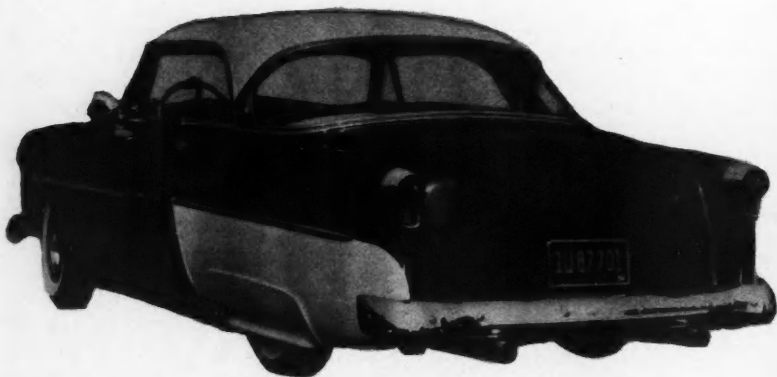
Photos by Eric Rickman

A HOBBY, as Webster puts it, is an occupation or interest to which one gives his spare time. Of course, just what spare time is supposed to consist of is a big fat question these days.

Ray Moore, a resident of Lakewood, California, is the kind of a guy that eats, sleeps and dreams cars and you know they're the best kind.

Ray attributes his car hobby to no one, all he knows is that he was searching for an interesting medium that would have prime importance for younger years. Something that when completed would give him the proud feeling of accomplishment. His choice was customs, and the trophies on his home fireplace mantel for local auto shows tell

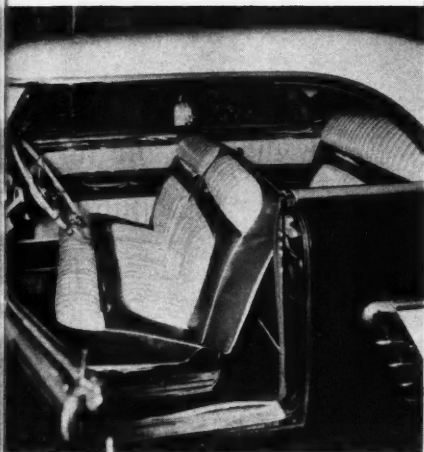
the rest of the story. For the last four years Ray and his '52 Ford's steady diet has been car clubs, club activities and custom automotive shows in and around his locale. At the present time he says he's ready to shoot the works and start anew; unloading the old hack and begin customizing a later model with some fresh ideas, hoping to be selected for the International Motor Revue scheduled for the middle of October this year. If his past history can speak for the future, then Ray Moore's entry has a good chance of making the program.



The stock taillights were removed and '52 Olds frames and lenses were adapted in their place. Rear bumper also has had guards removed. Airscoops have been built into the rear fenders where stock chrome scoops are simulated. VanLouween's garage in Artesia, Calif., is credited with doing the body work. Exterior color is purple and white. Doors and deck are operated electrically. Car is lowered modest amount front and rear.



One of the great differences in Moore's custom from others is that he used the bolt on method instead of frenching and molding in. The grille consists of a '53 Chevy grille shell, merely bolted on to frame opening. The floating grille bar was made up from a '51 Ford center bar with the end pieces welded solid. The hood has been nosed and headlight rim left stock. The bumper has had guards and trim removed.



The interior has full treatment of rolls and pleats. All interior trim such as the window frames, etc., have been chrome plated.



Trunk compartment is point getter with its true show custom theme. Pacific Custom Shop of Bellflower, Calif., did the stitching.

By Ray Brock

MICRO



MIDGET POWER PLANTS

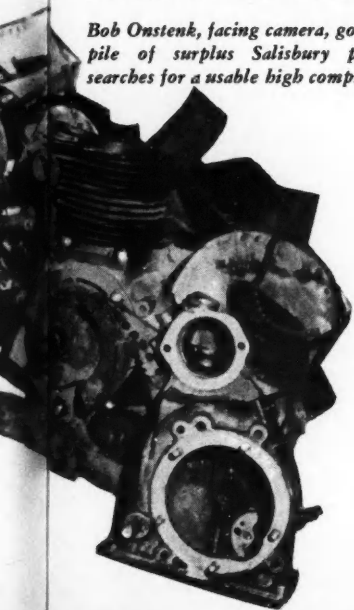
PART III CONCLUSION

Photos by Rick

THIS is the last of our three part story on Micro midgets and it can be termed the most diversified section of the whole Micro story. Engines are the subject and we can almost say without fear of being contradicted that most engines falling within the micro limits have been tried at one time or another.

Engine displacement varies from one association to another but a general rule is for flathead engines to be allowed top displacement, followed by overhead valve engines of lesser size which in turn are ahead of overhead cam and two cycle engines in displacement. Regardless of what association rules you might be under, the general consensus

Bob Onstenk, facing camera, goes through a pile of surplus Salisbury parts as he searches for a usable high compression head.



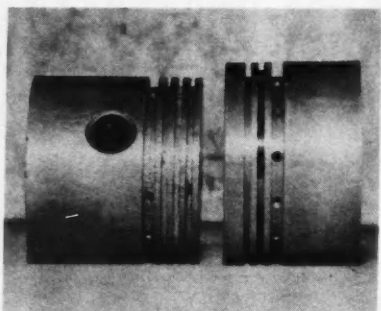
is to bore whatever engine you have as big as the rules will allow, fit the biggest valves you can, add a hot cam and other improvements, then sprinkle liberally with alcohol and nitro.

The simplest manner of obtaining a hot power plant for a Micro would be to buy one of the European competition bike engines such as an NSU, Villers or another such engine that has already been endowed with ample horsepower per cubic inch. However, the price of such an engine is almost prohibitive. Most builders end up with a Mustang, Salisbury or Wisconsin engine which they soup up themselves. Another popular engine is a Harley-Davidson 45 cubic inch engine with one barrel removed. This gives 22½ inches which will fit within the flathead allowance of some associations. Should it be too large, sleeving or destrok-ing will make it legal.

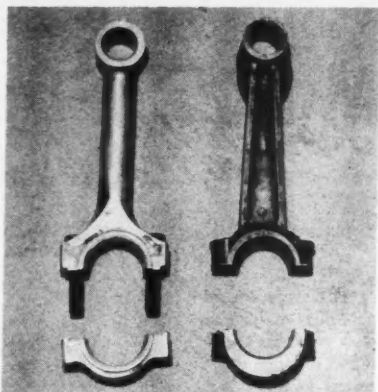
Whatever engine you choose and whatever type chassis you build to drop it in, mail received from all over the country since we started this three part series indicates that just to get in there and compete makes micro midgets top grade entertainment for the builder and driver.

When it comes to entertainment, spectators are in for it too when they attend these Sunday afternoon events. The Southern California Micro Midget Association has had to move to larger quarters at 190th and Hawthorne boulevards in Los Angeles to make room for more spectators. The only trouble is, so many spectators are getting the bug that car building in this area has reached a big scale and the SCMMA officials are not sure where they are going to put all of the cars. Looks like another association will have to be formed but that shouldn't pose any problems because it is happening all over the country. ➤

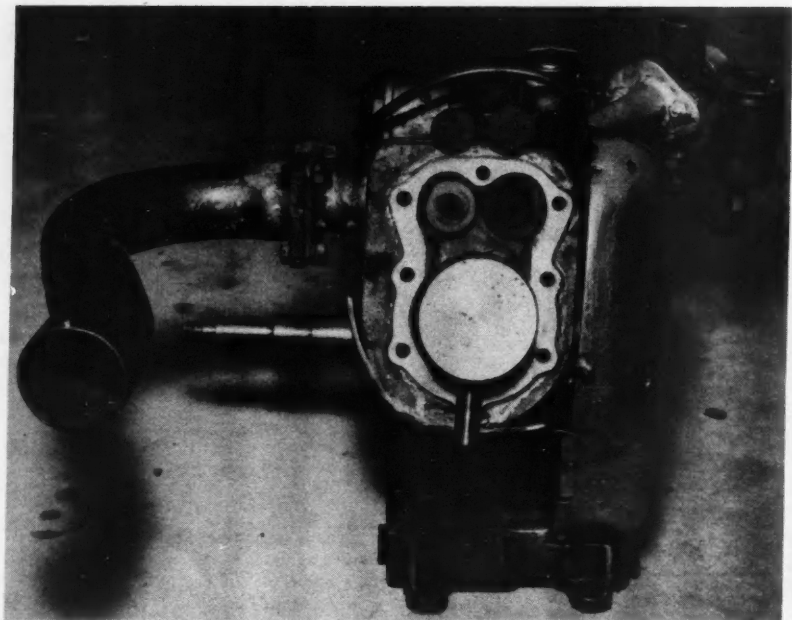
MICRO MIDGETS continued



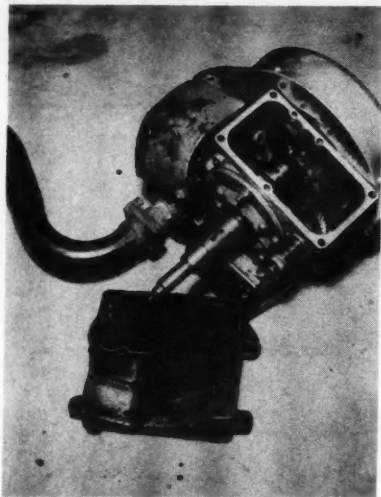
Stock Salisbury piston at left was replaced with a flat top racing piston designed for Ford-Merc block. Merc piston is 3 3/16 in.



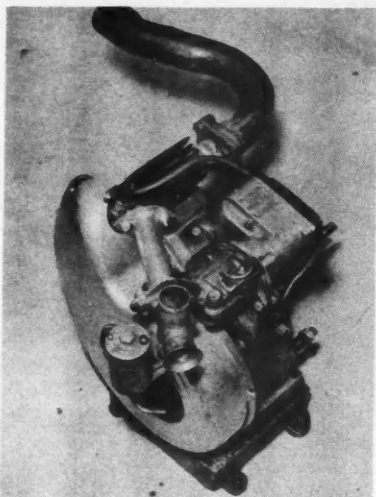
Stock Salisbury rod, right, often breaks at high speeds so special aluminum rod gives more strength. No insert is used.



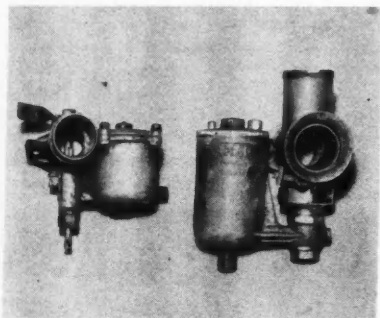
This Salisbury engine has been bored to increase the displacement 3 inches to 22 inches. The stock piston in the cylinder shows how much difference a three cubic inch increase makes. Stock 1 and 1 1/8 inch valves above larger 1 3/8 and 1 5/8 valves in block show how the breathing is improved. Note the block relief between the valves and the cylinder.



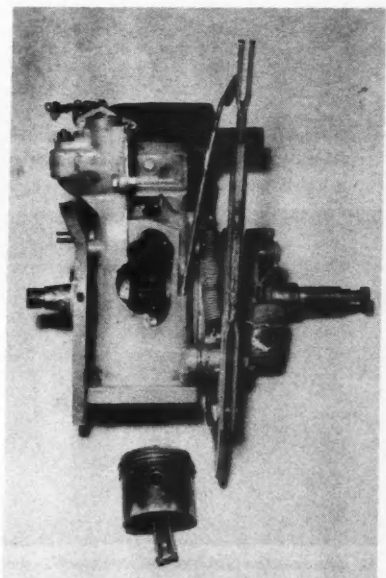
With aluminum crankcase removed, bottom end of Salisbury is exposed. This engine is widely used because of pressure oil system.



Long intake manifold was not designed for any specific reason other than to afford a more accessible location for the Amal carb.



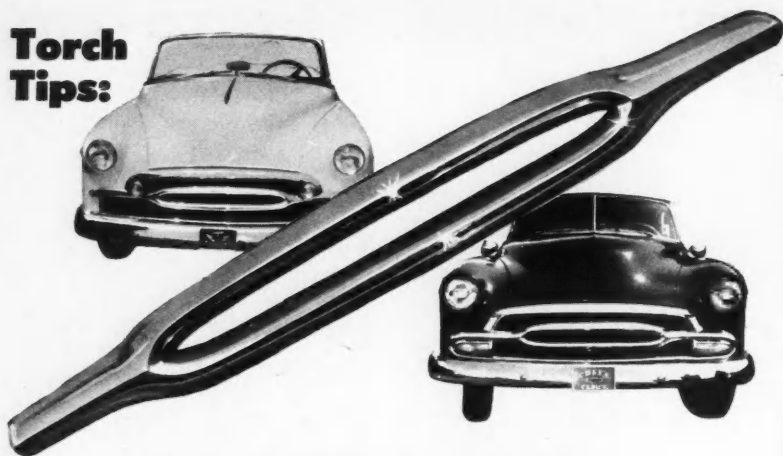
Amal carburetor at right has 1 inch venturi and can be jetted to use alcohol or other hot fuels. Stock Salisbury carb is too small.



Here is what can happen to an engine when a rod breaks. Special rods help stop this.

CONTINUED ON PAGE 63

Torch Tips:



Pontiac Grille Bar for '49-'52 Chevy

THE '54 PONTIAC grille bar is far from reaching its saturation point with customizing fans. Proof is the many letters accompanied with snapshots showing this component installed in about every conceivable make of car. Our first venture on this subject was in the October '54 "Torch Tips" (Installing the Bar in '49-'51 Fords). Since that time we have been swamped with inquiries from Chevy fans asking for the correct and easiest method to make a similar

installation. Most of the information seekers pinpointed the '49-'52 model Chevy for their choice. A '51 Chevy was procured and Valley Custom Shop of Burbank, California did the rest. The complete job took owners, Neil Emory and Clay Jensen, a fast two hours to button up; a minor operation in anybody's language. On '49-'50 models, the parking lights are positioned at each end of the stock center bar. When fitting up bar, cut ends so as to fit just under lights, making seams obscure.

Photos by Bob D'Olive



1. Remove the center and top grille bar along with parking lights for accessibility.



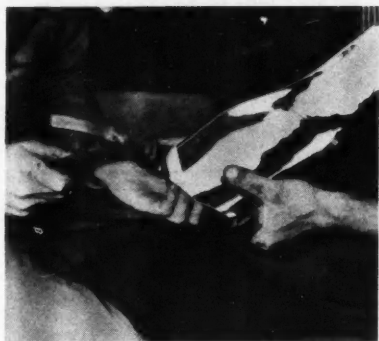
2. Mate stock bar to Pontiac bar for marking length. Allow $\frac{1}{2}$ inch over at each end.



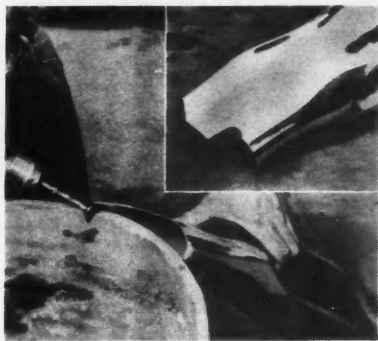
3. Snips are used to cut off end sections. Take caution not to chip chrome from edge.



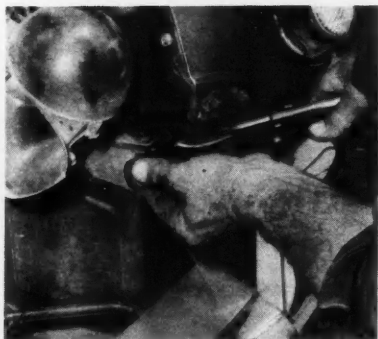
4. Fit new bar into position and mark it off allowing ends to slip under top bar.



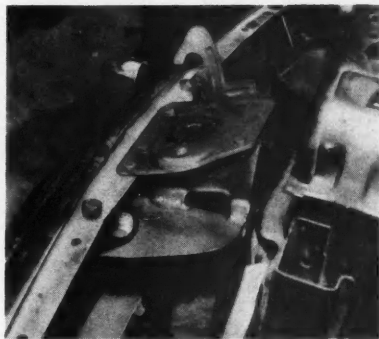
5. At the inner rear corners, bend the bar down by using a small dolly and a hammer.



6. Corner tabs are drilled and used for attaching. (Inset shows completed end cut.)

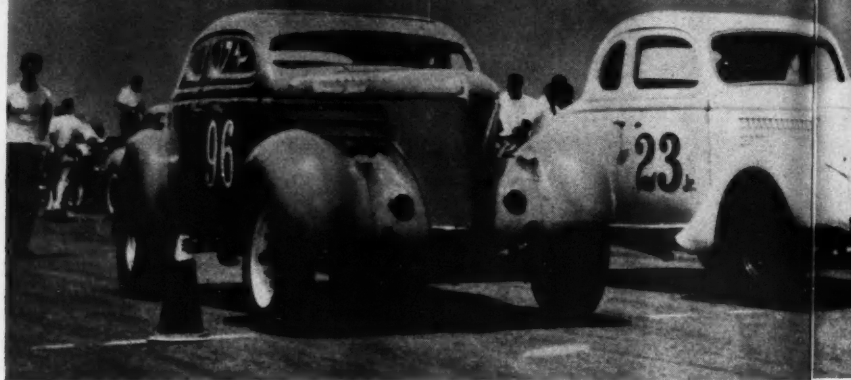


7. The inner body panels behind grille have to be notched to allow the grille to fit.



8. After the Pontiac bar is secured, a brace is welded to the hood latch support.

DRAGGIN' FOOLS!



The Millwinders (left) and Drifters charge for the finish line as Paul Wallace flags them. Drifters and Millwinders turn 1/4-mile drag in 115-125 mph. Cars were built as all out club

WITHOUT white-hot competition, any drag strip can become just another 1,000 yards of scorched macadam. Without the running battle between the "Drifters" and the "Millwinders," many an afternoon at the drags would have been short the spark that only these two club project cars can generate. And when we say club cars we mean just that, for the Drifters' white 'thirty-five' and the Millwinders' red 'thirty-six,' both from Redondo Beach, California, represent the combined efforts of their respective groups.

Aside from the obvious outward features, probably the most interesting difference between the two coupes is the matter of engine placement and subsequent weight distribution. While the Millwinders' Ardun-Ford power

plant appears to rest on standard mounts, the Drifters' Merc flathead is stuffed back 20% of the wheelbase, necessitating an all-new aluminum firewall.

About these engines: the Millwinders' $3\frac{3}{8} \times 4\frac{1}{8}$ Ardun ('48 Merc block) claims 284 cubic inches, employs Herbert roller tappet cam, Hilborn fuel injection and a Harman & Collins magneto; the Drifters' '46 Merc flatie has a considerably larger bore (3.405 inches) and the same stroke, giving a total displacement of 300.5 inches. The Drifters rely on a Potvin 400 cam, three Stromberg 97's jetted for nitro, and a Kong battery ignition. Neither engine has the benefit of radiator cooling, the water contained in the block being enough to keep the temperature down for the quarter-mile runs.



Millwinders-Drifters, cross-town rivals with their competition coupes, but really brothers under the skin

By Bob Greene

Photos by Bob D Olivo

off. Both cars are great crowd pleasers. Both projects and are maintained by members.

And if the Millwinders' Ardun should become indisposed, they've got another little bomb, 268 cubic inches of flathead Merc with a $3\frac{3}{8}$ bore and a stock stroke ($3\frac{3}{4}$ inches). This combo includes: Howard M14 cam with .373 lift, four 97 Strombergs on a Sharp intake manifold, and W-H Zephyr ignition.

Bodywise, the Millwinders have the edge on their cross-town rivals with six inches removed from the top of their red coupe. The top of the windshield has been slanted back three inches and the windows replaced with $\frac{1}{8}$ -inch plexiglass. Both cars have been gutted and lightened to the hilt with lightening holes in frame and body and, as in the case of the Millwinders, the substitution of aluminum sheeting for flooring. Those gaping holes in

(Continued on page 29)



DRAGGIN' FOOLS! continued



Drifters' cockpit arrangement is simple and uncluttered. Firewall was rebuilt from aluminum when engine was moved back.



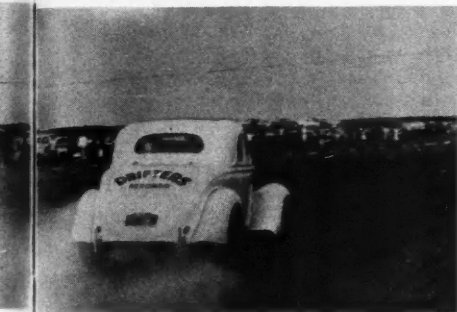
Tube push bars are mounted solid to frame. Holes in fender serve two purposes: air turbulence and trapped heat escape routes.



Millwinders' interior consists of same simple features as that of Drifters. A little more snug due to the six-inch chopped top.



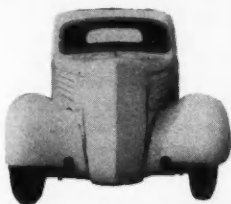
Push tubes are also employed on Millwinders' car. Openings in fender are for relieving turbulence. Note the overall height.



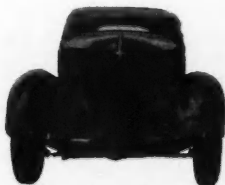
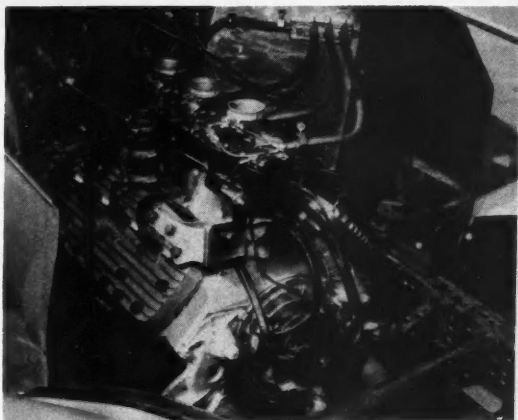
(Continued from page 27)

the rear fenders, however, have another purpose, that of relieving heat and air turbulence build-up behind the rear wheels. The grilles on both cars are covered with sheet aluminum in the interests of streamlining, what with the absence of radiators.

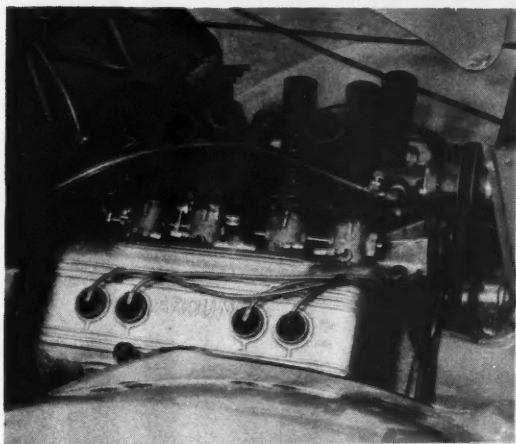
Which club has the upper hand? That's a question that may never be answered. With the kind of club spirit that these boys radiate, it's difficult to imagine anyone getting the best of either of them . . . that is, until the next drag the following week!

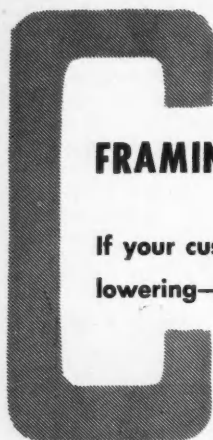


Drifters' potent powerplant consists of a 300.5 cubic inch Merc. Equipment includes Edelbrock 9.1 heads and triple manifold. Carburetors are 97 Strombergs, Potvin 400 cam. The ignition is a Kong battery type.



When not running fellow member Jack Ewell's fabulous Ardun engine, Millwinders' coupe is powered by 264 cubic inch Merc flat-head. Millwinders' engine is located in stock manner.

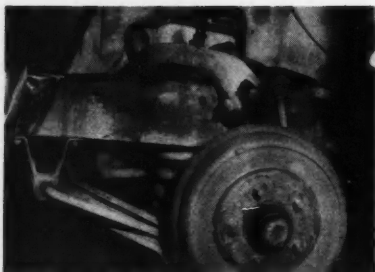




FRAMING AND DRIVESHAFT TUNNELING

If your custom rides hard due to radical lowering—give it the cure

C FRAME FRONT



1. First step is to rest the car on blocks and then remove wheel for accessibility.



2. Chalk off section of frame to be removed. 8 to 10 inches long, 2 inches wide.



3. A cutting torch is used to remove section from frame. Chalk line serves as guide.



4. For a neat job, take torch and retrim, cutting the jagged edges from the opening.

ALL OF US have witnessed a lowered custom car bobbing down the local avenue as if the body was welded to the axles. This is anything but *the new look*. Lowering cars has been a practice with the younger set for a long time, and it will continue to be so because it's an unending *fad*. There is no unforgivable sin connected with lowering a car as long as it is done properly and as long as it isn't dropped past the *point of no return*.

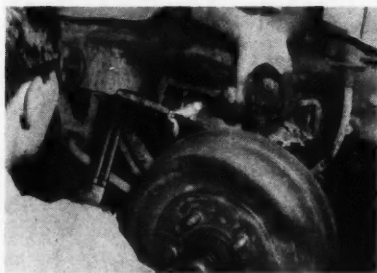
In the June '54 CAR CRAFT we featured three varied methods of lowering front suspension systems. All three netted approximately a sufficient three-inch drop. Anything below this level is beyond alignment, unless the A-frames are completely modified. Two common approaches used for lowering rear ends are lowering blocks and de-arched springs. Traveling under average road conditions, no bottoming would be experienced with any one of these setups mentioned. On the other hand, severe dips and bad roads

would result in an unpleasant ride.

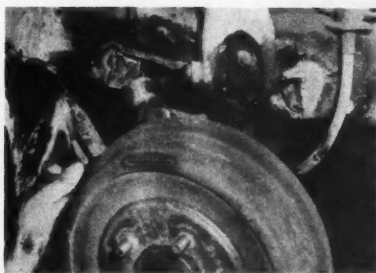
The following C-framing story concerns itself not with lowering, but rather for lowered cars that experience the aforementioned. What is actually meant by C-framing is this. A section of the frame rail is removed where the stock rubber bumpers come in contact with the axle housing or frame on hard downward travel. By relieving the frame ($1\frac{1}{2}$ -2 inches) at this point, you actually gain back two-thirds of the travel area that was lost by lowering. This small amount is enough to spell the difference between a good ride and a bad one. To many amateurs the thought of cutting away a section of the frame may sound a bit on the radical side, from the standpoint of weakening the frame. But this practice has been successfully employed by top custom shops for several years.

It must be remembered that if you plan to drop a car to the ground, other complications

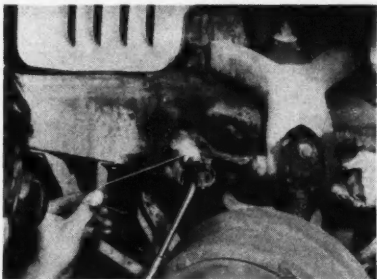
(Continued on next page)



5. After removing side piece from frame, go in and cut bottom frame section away.



6. Small pieces of side plate are spliced on, then folded back, boxing up opening.



7. Tabs are welded solidly in place giving additional strength and professional look.



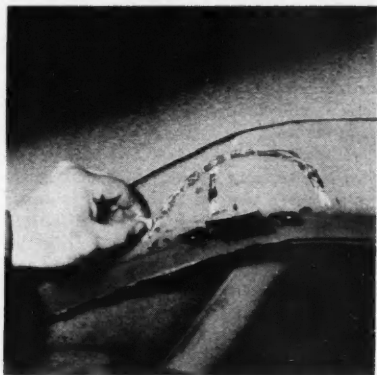
8. Finished item should look like this. Travel has been improved by a full 2 inches.

C-FRAMING continued

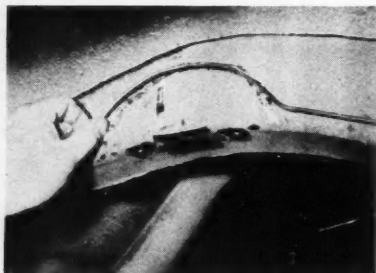
C-FRAME REAR

set in; mainly the driveshaft tunnel. Modifying consists of merely opening it up in height, allowing the driveshaft to travel free from rubbing at the top of the tunnel. It all boils down to this: if you're going to have a pleasant riding lowered car, C-framing is the secret. Cars that were used for the following illustrative photographs were a '49 Ford, a '50 Merc and a '52 Merc. Even though these are of the Ford family, the same procedure can be used on almost any make. We wish to thank the Barris Brothers Custom Shop, Lynwood, California, and George Cerny's Custom Shop, Compton, California, for their cooperation with this article.

(Continued on page 64)



1. Block up car and remove wheel and rubber bumper. Chalk section to be removed.



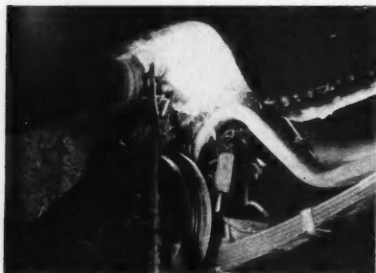
2. A rod is formed to the chalk line's contour which will serve as a template.



3. The rod's contour is now transferred off onto a piece of $\frac{1}{4}$ -inch flat plate iron.



4. Once the pattern is scribed onto the plate, the cutting torch is put into action.



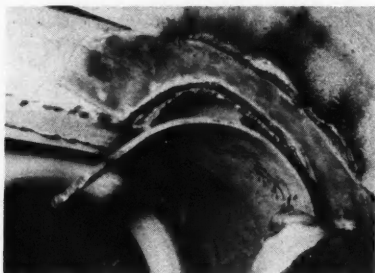
5. Iron plate piece is now aligned with the scribed lines on frame and welded in place.



6. With plate welded to side of frame a cutting torch is used to remove frame section.



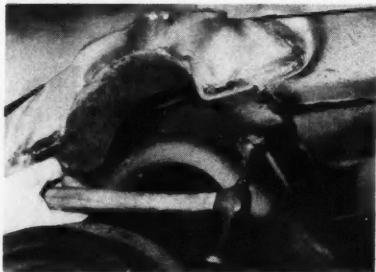
7. Taking another piece of 1/4-inch iron plate stock, form it to cut out section of frame.



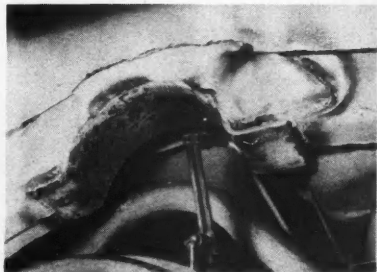
8. The half round section fits up into the removed section where the frame was cut.



9. Once formed to the correct contour of the cutout, it is then welded in place.



10. Where plate hangs down from frame, heat is applied, end bent up to meet frame.



11. To finish up the job, arc weld the end sections to the frame rail for support.



Norman Crum



Norene Crum

NORM'S AUTO BODY

RESTYLING

A MAN AND WIFE team isn't the most one of the country's top custom shops, but it's a breeze. Norm explains that the secret to the work and painting is strictly his department, and painting to the better half—sounds like this arrangement on the other hand, grounds for a divorce. Norm's business when he was discharged from the Army after to work for a custom shop in Hollywood, with the knowledge for straight custom work he then specialized in sports car work. With several years made the big move and opened his own sander many custom cars he has turned out, he couldn't were many customs touring Southern California. Norene and Norm's pet personal project at the moment is a Volkswagen that they're giving the full restyling and the work being executed on the Volks are just as much as the backseat for restyling ideas and Norm admits to working with styling goodies. The shop is located at 8177 Hollywood Boulevard, Los Angeles, California. Norm invites any questions on customizing to drop in anytime—the coffee pot is always on.



YLES

'49-'51 FORD CLUB COUPE

the most common combination for managing shops, but to Norm and Norene Crum, it's a whole operation is that the body work and paper work and sanding of cars belongs arrangement has great possibilities; but on the Norm's body work experience dates back to my after World War II, whereupon he went Hollywood, California. After gaining sufficient he then did a tour with a body shop that several years of experience behind him, Norm's fender bending emporium. When asked how he couldn't recollect, but he did say that there California that have felt the ol' vixen file. ect at the present time is a cute little Volks-styling treatment. The innovations that are as much Norene's as Norm's. She takes no admits that she's very clever in coming up ed at 8175 Melrose Avenue, Hollywood, Cali-customizing and welcomes the local talent to ys on.



Cutback taillight styling lends the popular forward look. Hubcaps are full moon disc.

AUGUST 1955

THE '49-'51 Ford is considered one of the tenderest morsels that a body shop can possibly sink a grinding disc into. Norm's Auto Body proves this with the club coupe that serves as our first guinea pig for this new monthly CAR CRAFT feature.

The first major step the shop took in restyling was to section the body a full five inches, leaving the top perfectly stock. This tends to give the car a sporty flavor common to the elite sports cars built in Europe which are presently catching on fast in the U.S. with experimental cars and standard production models. Witness the Studebaker and many others. The full radius wheel openings that have been incorporated go along with the same theme.

The hood and grille treatment is such that they utilize both old and new components. Two '49 Merc grille shells were molded to the top and bottom of the grille opening to give it the smooth oval appearance. Filling the opening are two '55 Ford chrome waffle grille sections that have been trimmed to fit. The hood has been shortened five inches at the front edge to give it more of a lid motif. A slight peak has been built up, running the distance of the center seam, and all four corners have been rounded. An aircoop is built into the front lower section of the body just under the bumper, assuring sufficient cooling. The front bumper remains stock but the guards have been removed. The stock chrome stove bolts are retained for attachment.

The front fenders have the new Plymouth styling of heavily shaded headlights. This was accomplished by building a superstructure from tubing to the correct form, then filling in the area with 18-gauge sheet metal. The front section of the fenders that appear recessed are filled sheet metal also and are contoured perfectly to the headlights. This type of treatment applied to the front fenders nets approximately four to five inches additional length.

The taillight styling the shop gave the car is a very clever arrangement. '55 Stude-

(Continued from preceding page)

baker light frames, lenses and sockets have been utilized. The rear fender overhang is similar to that of the front. Tubing is used to achieve rolled edges which surround taillights. Another '55 Studebaker component used is the bumper that contours the tail-light perfectly and harmonizes with the small extensions of the fenders.

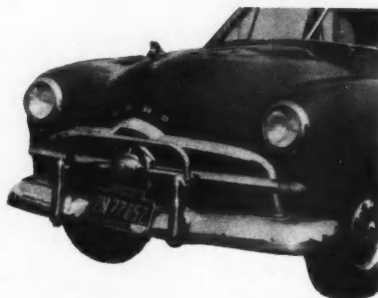
All trim has been removed and body seams filled. The doors and deck lid are operated electrically, with door corners rounded. Other incidental accessories consist of full disc hub-caps, twin pipes, etc.

The finished Ford product is definitely a custom and is slanted along the modern vein. The styling carries several '55 motifs. Its overall styling is not one made up of many pieces but one that has innovations that compliment the others, with a solid customized overall appearance achieved. A few of the ideas can be picked up for individual purposes, but most of them would lose their effect without the sectioned body.

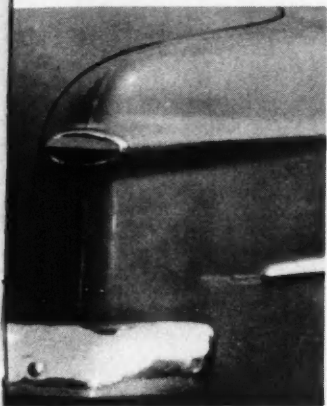
We wish to thank Norm's Auto Body for the first restyling feature for CAR CRAFT. Next month we plan to move to San Diego, California, where Styler's Custom Shop will do the honors in restyling a '51-'52 Chevy club coupe—see ya next month.

PARTS AND PRICE LIST:

	LABOR	PARTS
Body section	\$700.00	—
Molding in Merc grille shells and splash pan. Installing grille ('55 Ford grille)	110.00	\$31.60
Reworking hood, peaking and rounding corners	125.00	—
Extending front fenders and frenching headlights	200.00	—
Rounding door corners	80.00	—
Filling Body seams	30.00	—
Radiusing wheel openings	120.00	—
Extending rear fenders and installing taillights ('55 Studebaker taillights)	150.00	11.00
Installing rear bumper ('55 Studebaker bumper)	10.00	34.50
Removing trim from deck; installing electric solenoid and push button	55.00	9.95
Filling door handles; installing electric solenoids and push buttons	70.00	19.95
Building front air scoop under grille (optional)	25.00	—
Custom lacquer metallic paint job (optional)	250.00	—
	\$1925.00 Labor	
	107.00 Parts	
	\$2032.00 Total	

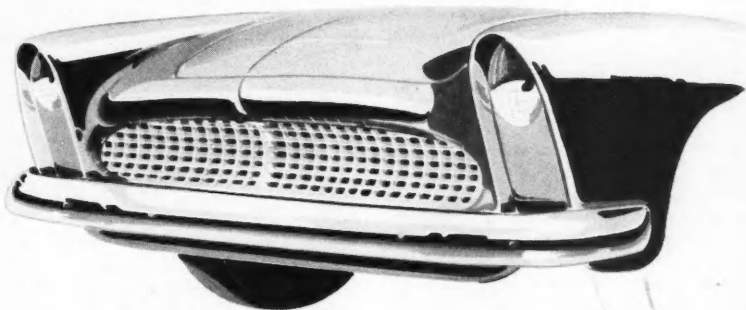
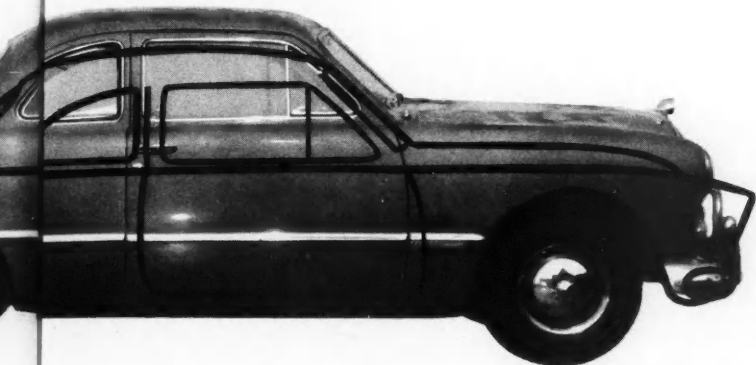


Grille has sports car look with its '55 Ford waffle type grille. Grille housing is fabricated from two '49 Mercury grille shells.



The detail of the taillight at far left depicts overhang of the fender surrounding the stock Studebaker taillight housing. Tubing is used to obtain the fender's rolled edge. The bumper is also from a '55 Studebaker.

Line illustration superimposed over photo of stock car clearly illustrates the radical alterations that take place when sectioning. Chassis lowering devices can be employed after sectioning, but they aren't needed.



HYDRA-MATIC SHIFTS CAN BE CONTROLLED

With this simple operation

By Ray Brock

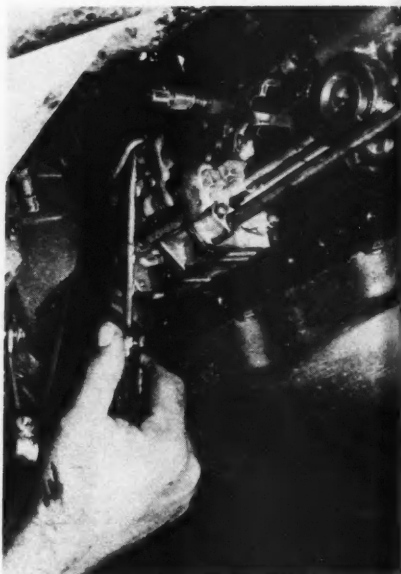
IF YOU ARE driving an automobile equipped with a dual range Hydra-Matic transmission, we have something here which might interest you: It's a cinch to interest anyone who competes at one of the numerous drag strips in the country and has at one time or another wished that he could control the Hydra-Matic shift points.

The Hydra-Matic valve mechanism gets the word from a governor on the transmission tail shaft so that the shift points of the transmission will never let the engine exceed a pre-determined RPM when operated in Drive range. On cars having hydraulic lifter equipped engines, this RPM will never exceed 4,000 RPM by much at full throttle.

When the side cover of a dual range Hydra-Matic is removed, a complex valving mechanism is exposed which controls all of the shift points of the unit. Four cap screws hold this valve body to the main transmission case, and when removed, allow the body to be disengaged from several oil routing pipes. On one end of the main valve body (see photos), a smaller casting called the timing valve end casting is located. Located within this casting

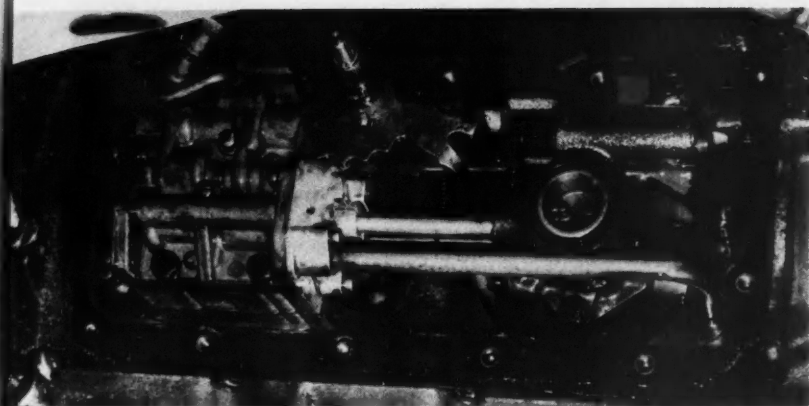


With shift lever and transmission throttle lever removed, cap screws around side cover are taken out. Save transmission fluid.

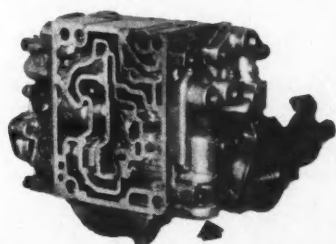
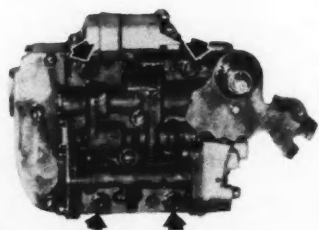


Small formed tube between body and case easily removed by prying with screwdriver.

(Continued on page 40)



This is the view that greets you with side cover removed. Valve body at left is the brains of the Hydra-Matic unit. Various tubes slip into valve body and pull out easily when four cap screws holding body to case are removed. See photo below.

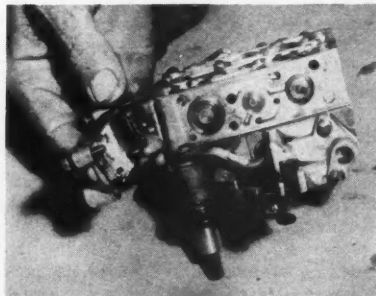


The four cap screws indicated by arrows are all that hold the valve body to the case.

Arrow points to timing valve end casting which contains the over-control valve.



Three screws which hold the timing valve casting to body are removed for next step.



With the screws loosened, casting is taken off. Do not disturb the pistons exposed.

HYDRA-MATIC SHIFTS

continued



A piece of 1/4 inch rod is cut about 3/16 inch long to fit between piston and spring.

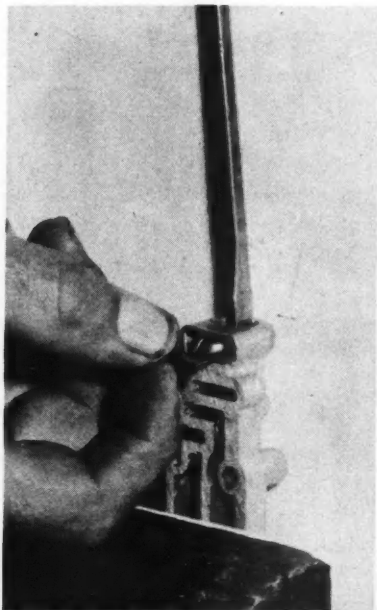
(Continued from page 38)

is a spring loaded piston which bears the title of the over-control valve. This is the valve which causes the transmission to upshift into fourth at approximately 75 mph while the shift lever is still in third range. On '54-'55 Oldsmobile transmissions (and maybe others we aren't familiar with), this valve is also responsible for a second gear to fourth gear shift even though the transmission selector remains in Lo range. This prevents pumping up the lifters and floating valves by over-revving the engine.

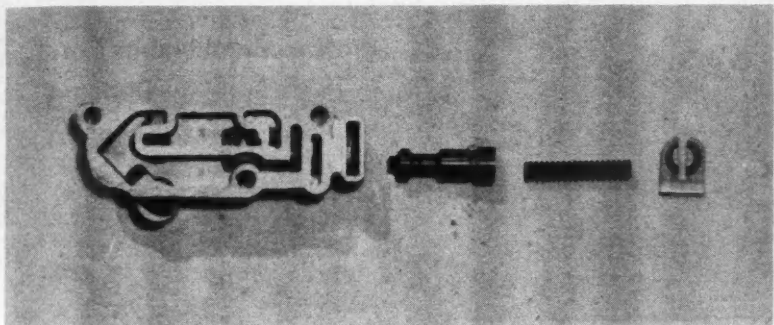
If a small piece of 1/4 inch rod is inserted between the over-control valve piston and its pressure spring, the action of the piston is stopped and the transmission will not shift out of the gear indicated on the shift quadrant. The 1/4 inch slug which is used to block the over-control valve should be as long as possible and still allow the spring to be reinserted. This length is about 3/16 inch. In effect, this makes the Hydra-Matic a manually controlled transmission with the exception of first gear. Actually, first gear ratio is so low that it is good for the initial jump it gives before the second gear shift only. Another good thing about a Hydra-Matic which can be controlled is that you can't miss a shift, that is, unless you shove the lever all the way into neutral.

All this modification does to the transmission is to allow you to leave it in second and third ranges as long as you wish. If you happen to have an engine that isn't quite

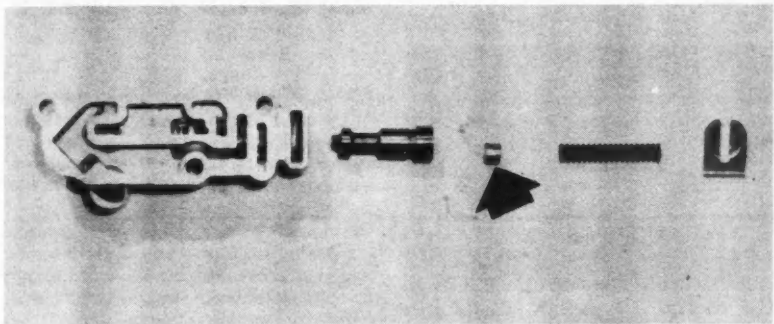
stock and especially if you have a high RPM cam, this is the ticket for you. It doesn't cost anything unless you tear a gasket removing the side plate and it will let you be the boss about when it's time to shift.



Screwdriver point is used to force against spring while retaining clip is withdrawn.

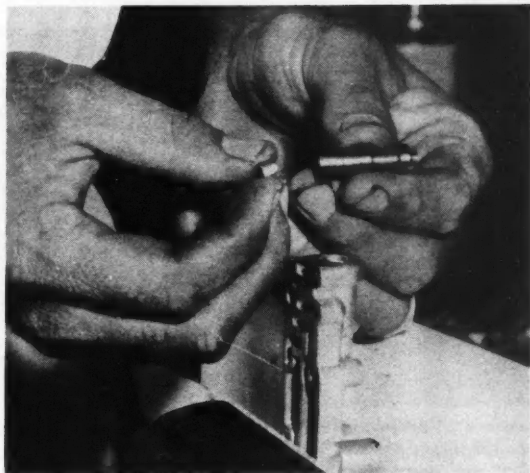


Exploded view of over-control valve parts are shown. Piston routes oil through casting.



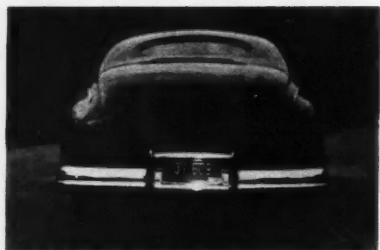
Arrow points to small 1/4 inch spacer which is needed to block out over-control valve.

The 1/4 inch plug is put into the back of the piston, ahead of spring. The plug should be as long as can be used while still leaving enough spring compression to re-insert the retaining clip. With the plug in the valve, the unit is now ready for reassembly and for high RPM's.

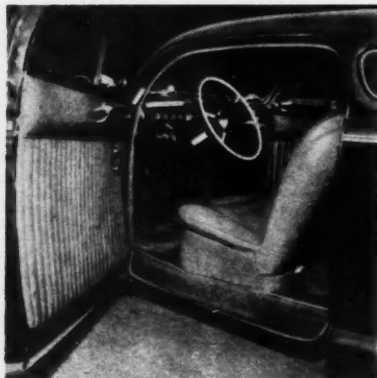




The stock taillights have been neatly encased into the rear bumper guards (see CAR CRAFT, April '54). Exterior color is copper.



Rear view displays smooth rounded style which is achieved when body seams are filled and top is chopped to a radical degree.

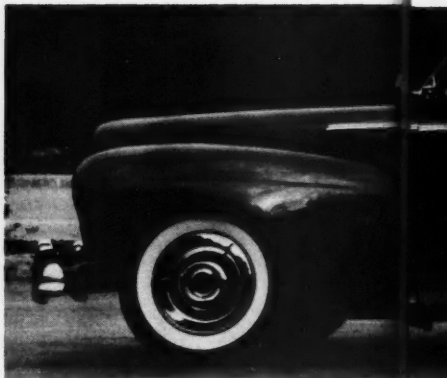


Gaylord's Upholstery Shop did the honors of rolled and pleated interior. Color is light tan, contrasting exterior beautifully.

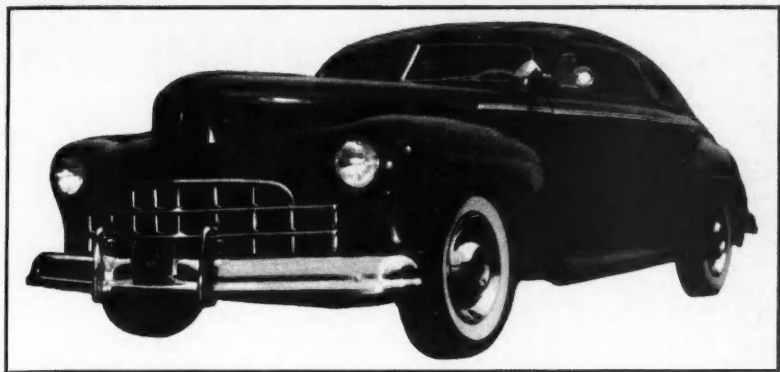
**With a Membership Card
in the "Streakin' Deacons"
It's Only Natural That
John Logg Would Own**

A GOIN' CUSTOM

HOT RODDING and custom cars have come a long ways since their earlier so called young sandlot days. If you don't think so, drop by early some Sunday morning for services at the First Presbyterian Church of Hollywood, California. The intersection of Gower and Carlos on Sunday morning looks as though it is about to become the target for an all out custom and hot rod show. Actually it's only a great bunch of guys that call themselves the "Streakin' Deacons" making their early sabbatical tour. The church car club's moniker sort of gives the secret away, for no



Photos by Joe Moore



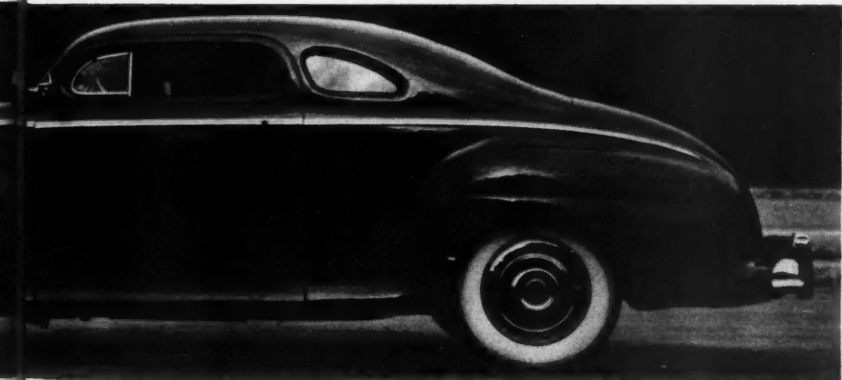
Stock grille was replaced with grille from '48 Cad. Modifications were needed for installation. Front end was lowered by using dropped axle and reversing the spring eyes.

more than seventeen dyed-in-the-wool car fans make up the club's roll call.

John Logg and his full '47 Merc custom is a typical member in good standing. John's car was given its radical restyling treatment by the Barris Brothers Custom Shop of Lynwood, California. The top has been chopped a full four inches. The front fenders have been squared and headlights frenched using '41 Merc headlight rims. Taillights are taken from their stock body moorings and have been built into the rear bumper guards. The grille emanates from a '48 Cadillac.

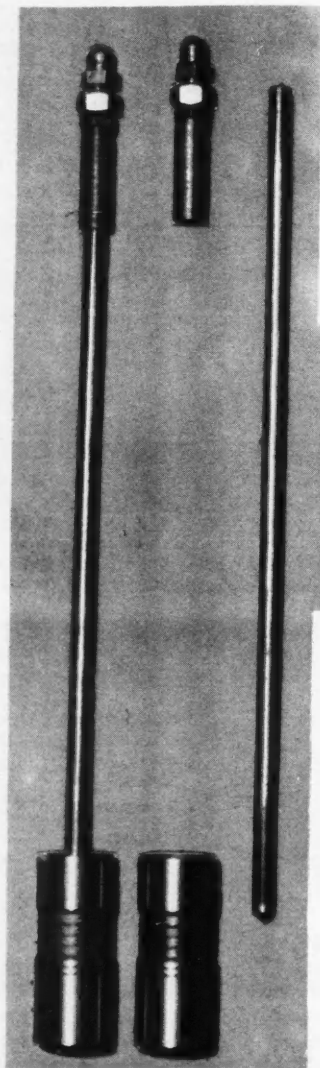
There's no dud to be found under the hood either, for the customized club coupe has toured the local quarter-mile tarmac at Santa Ana with a speed of 87 mph, and at the dry lakes, a flat out 129.

It bares out two very important points: one, you just can't determine how far this hot rodding and custom car fever is going to go; and, two, don't try to lay a speedy story on the man making with the handshakes at the door of your local church next Sunday, or you might get chosen off by the ol' master himself —the clergyman!

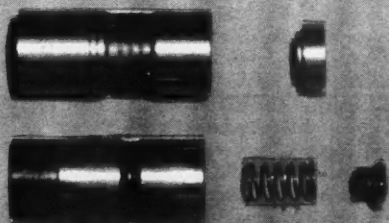


Top was chopped 4 inches with the rear section tapered considerably. Upper door sections were reslanted. Car was lowered at rear by C-framing and de-arching spring.

· · · **ADJUSTABLE PUSHRODS** **MORE RPM'S WITH · ·**



HYDRAULIC lifters are not the proverbial pain-in-the-neck which so many people have accused them of being in recent years. They are designed to operate in a particular engine within a definite RPM range, lately controlled by automatic transmission shift points. When the automobile is given reasonable care and not allowed to become sludged from inattention, hydraulic lifters should perform faultlessly for a long period of time. If, however, the engine is going to be "wound" to RPM's above 4500 (the



average maximum for most lifter and spring combinations), or if a reground cam is to be used, mechanical lifters are a must and a means of adjustment will be needed.

There are several makes of adjustable pushrods manufactured to replace hydraulic lifters which are either worn out or will not let the engine reach the desired RPM without pumping up. Another adjustment means which can be used is an adjustable rocker arm used in conjunction with collapsed hydraulic lifters.

When using mechanical lifters to replace a hydraulic system, the stock lifter may be collapsed by removing the valve mechanism and blocking the oil hole in the lifter body. A lifter may be used from another engine if the size is right or a specially made lifter may be used.

Text and Photos by Ray Brock

The method we used in this story was to buy a set of '55 Chevy V8 mechanical lifters and remove the pushrod seats from them. The seat merely fits on a ledge and will drop out if the lifter body is tapped on a block of wood. An oil hole in the body was blocked by driving a piece of brazing rod into it and trimming the excess both inside and out. The pushrods seat into a conical cup on the inside bottom of the lifter.

The adjustable pushrods which we are using in the pictures on these pages are those manu-



A piece of 1/8-inch brazing rod is the correct size for making plug to close off the oil hole in the '55 Chevy V8 tappet body.

Pushrod and tappet assembly used to replace stock Olds hydraulic tappets at far left. Exploded view of Olds tappet is below and the 1955 Chevrolet V8 tappet which replaces it is at left.



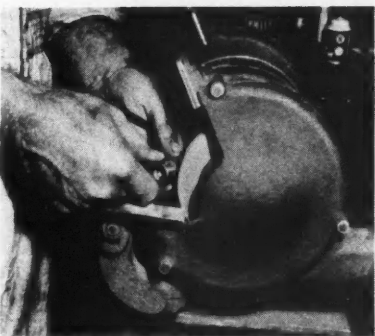
Brazing rod is slightly larger than the hole in tappet so a small hammer is used to drive plug in. Excess is snipped off.

factured by Ak Miller of 10302 East Whittier Blvd., Whittier, California. Ak sells either the complete pushrod for any year Olds or Cad, or the adjustable ends may be purchased to fit on shortened stock pushrods.

Stock pushrods from the Oldsmobile engine used were cut so that, when the Miller adjustable ends were slipped on, the bottom adjustment nut was just clear of the pushrod hole through the head. This provides ample adjustment of the pushrod ends.

First adjustments of the pushrods with the engine cold are about .004 or .005 with a stock cam. After the engine is warmed completely, a .003 feeler gauge is used to get the final adjustment on both intake and exhaust. The close tolerance, as compared to normal

(Continued on next page)



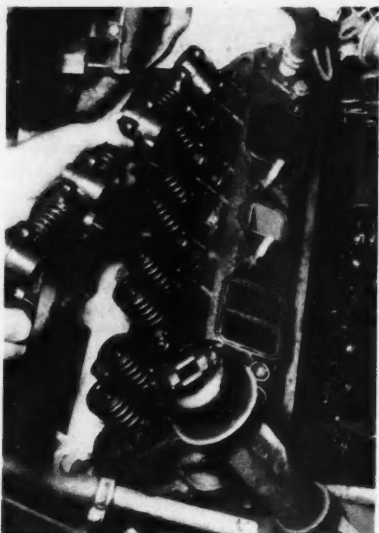
Brass plug is trimmed clear of tappet body with grinder. With pushrod seat removed from Chevy tappet, plug is cut off inside.

ADJUSTABLE PUSHRODS

continued

mechanical lifters, is required because the stock cam used with hydraulic lifters has very little clearance ramp. For use with a reground camshaft, set the clearances to the cam grinder's specifications.

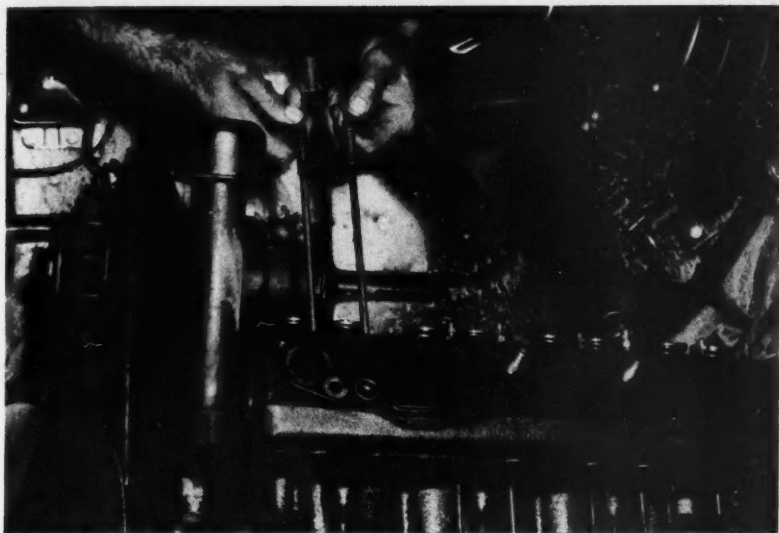
The mechanical lifters you gain with adjustable pushrods or rocker arms will make little or no horsepower change in the engine up to the RPM limit of the hydraulic lifters but, if you are running the RPM's over this limit, the adjustable jobs really take over. If the .003 clearances are maintained, no lifter noise will be present to give away the mechanical setup.



After removal of intake manifold, rocker arm covers and valve pushrod cover, the rocker arm shaft assembly is taken off so that stock Olds pushrods may be removed.



With rocker arms and pushrods removed, the hydraulic lifters can easily be pulled from their guides. Some earlier model Oldsmobiles require a tool to remove gummed-up lifters.



Stock Olds pushrods have been shortened and fitted with Miller's adjustable ends. These are combined with the '55 Chevy lifters to make a simple mechanical valve train.

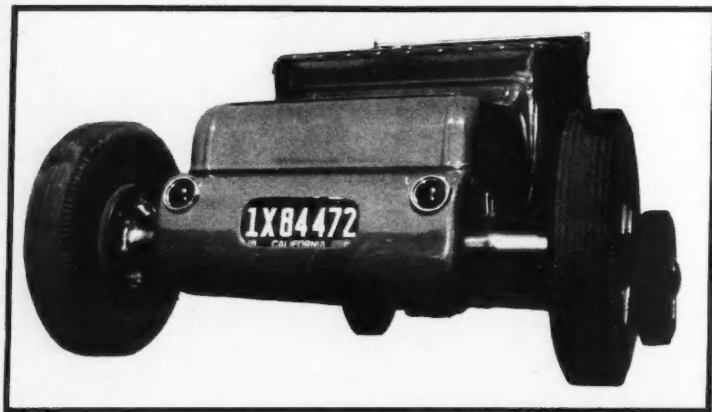


After installation of Chevy tappets and adjustable pushrods, cold setting of tappets is made. Initial setting should be about .005 cold with stock cam and .003 with engine warm.



Once a shining showpiece,
wrecked roadster
is born again...

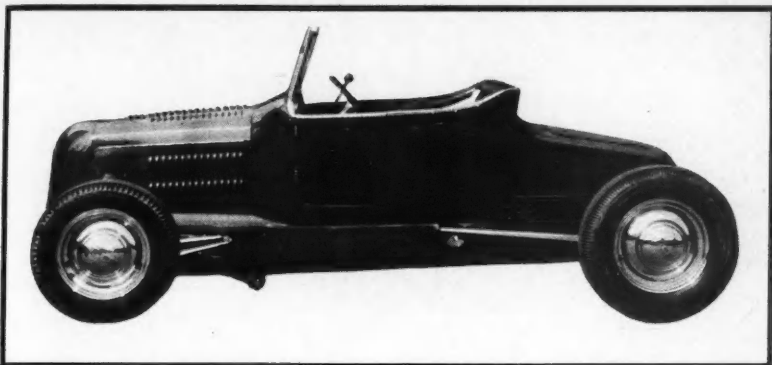
Rockin' 'T'



Some of the car's exterior points of interest are: rear license plate has been recessed into the lower belly pan, taillights from '50 Pontiac, chrome-plated rear axle and radius rods. Headlights are accessory items. The nose section and the full belly pan are made from fiberglass. Note the overhang of the front end and the neat fairing in of the front suspension components.

Engine compartment of "T" is slightly snug with '48 Merc powerplant installed. Car turns consistent century mark at local drags.





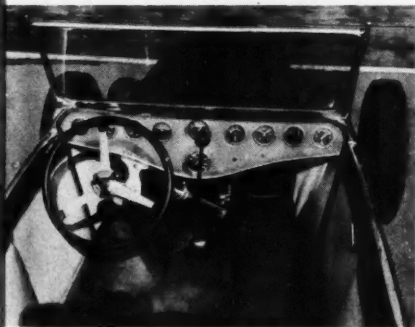
MUCH LIKE "Black Beauty" in Anna Sewell's classic of another era, the jet-black roadster built by Ray Bowles of Alhambra, California (featured on *HOT ROD* Magazine cover, January 1950), passed from owner to owner until it fell into the loving hands of Skip Hendrick, La Canada, California. Battered and bent, the T-V8 began to take on new life again as Skip molded a new fiberglass nose and shell, followed by a vivid red paint job.

Built on a set of old Star rails, the frame incorporates Model A crossmembers front and rear and a Model T center crossmember. The front axle was actually made for a Miller race car and is of chrome moly tubing, while

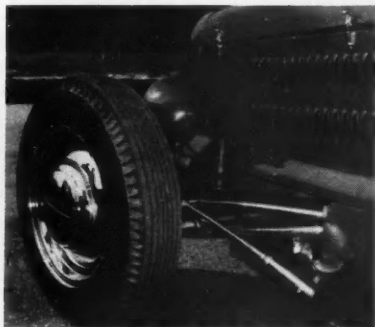
the 3.78 rear end and axle are of Model A derivation. Steering is also made by Miller.

The '48 Merc mill has had the bore and stroke increased by $\frac{1}{8}$ of an inch and speed equipment goodies include: Porvin $\frac{3}{8}$ cam, Jahns pistons, Edelbrock heads, and a Weiland triple intake manifold with Stromberg 97's on the ends and a 48 smack dab in the middle.

Highly excitable, the old "T" still brings home a good report from the drags; consistently over the century mark. And should the day ever come when the little roadster can't get off the mark, it can just sit back and reminisce—you see, it's been a top rod for over twenty years now!



Bob Lee's Top Shop in Pasadena, Calif., did the honors of upholstering interior in Vinylite plastic, also built cute sanitary top.



Radius rods and steering components are faired into the belly pan. Note the shock absorber arrangement. Brakes are '40 Ford.



Photos by George Barris

AS WE APPROACH the wire this month with our *Building a Custom* series, we can look forward to securing the lead pot and the vixen files. The first hurdle found on these two pages is removing and molding-in the door handles. This phase of the story can be applied to any car. On the following pages, you'll find the construction secret to building the cleverly styled taillights of the *Japan*; '51 Frazer taillight lenses installed vertically.

Finishing off the deck lid will be right up your alley after reading the past articles on the *Do's* and *Don't's* of Brazing and Leading. Next month will be the final installment of the series. At that time we'll have on tap the complete info on how to hook up the electrical system for the doors and the trunk, which actually applies to any car owner wishing to switch over to a pushbutton electrical door setup.

REMOVING DOOR HANDLES



1. Remove the door handle assembly, then grind paint from surface with grinder.



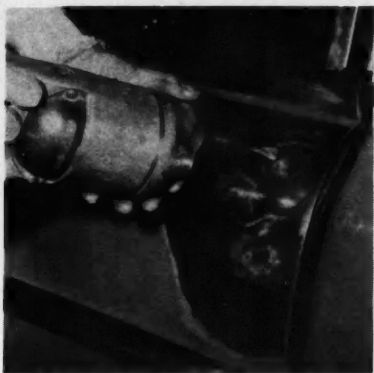
2. Cut sheet metal plug for the large handle hole, smaller holes may be brazed closed.



3. Place metal plug into position and braze. Apply wet pad to surface, minimize warpage.



4. An electric grinder setup with a 36 close coat disc is used to smooth out surface.



5. Drill and rotary brush are employed to thoroughly clean all the brazed sections.



6. When tinning surface, use a small steel wool pad and a small amount of torch heat.



7. Melt stick lead onto the surface, then fuse patches together with wooden paddle.



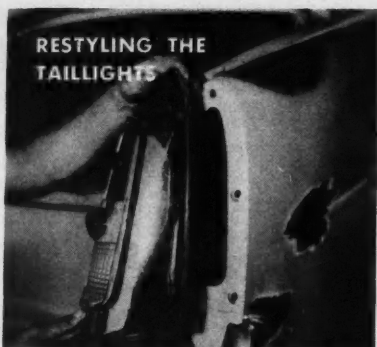
8. After lead has cooled, a vixen file is used to file surface to a smooth contour.



9. Mark off area, then blocksand. Clean the old paint with wax and grease remover.



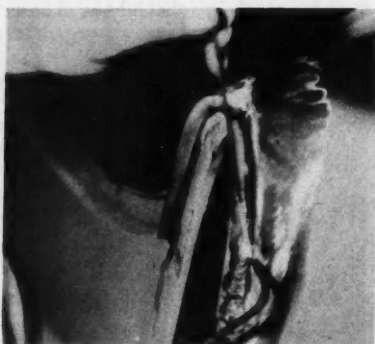
10. Before applying heavy coats of primer, clean the bare metal area with metal prep.



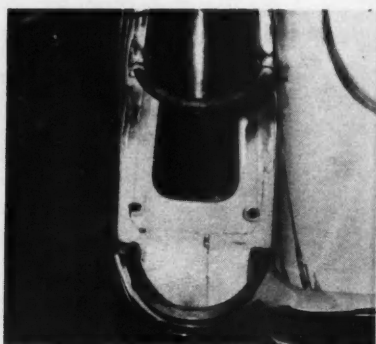
1. First step is to remove the complete taillight unit and the bumper assembly.



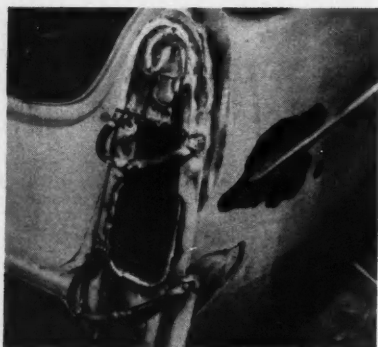
2. 1/2-inch round hot roll rod is now formed to the '51 Frazer taillight lens contour.



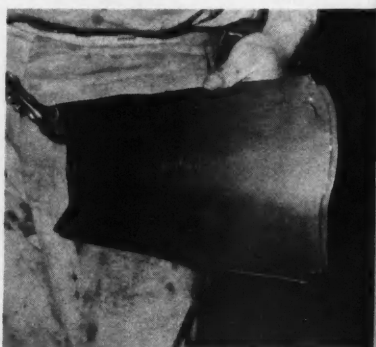
3. After rod has been bent and cut to size, align it to top of fender and weld in place.



4. Reinstall the bumper so the position and contour of the lower rod can be determined.



5. Here you see the necessary rod construction that surrounds the taillight lens.



6. A cardboard template is made of the area to be filled, then transferred to sheet metal.



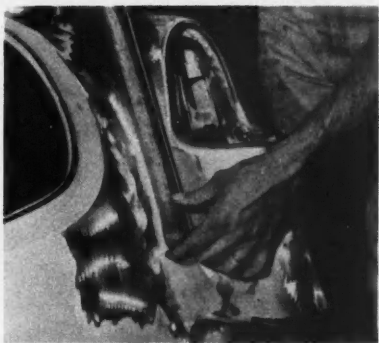
7. Before brazing on the fill-in sections, grind rod frame clean. Note vertical rod.



8. Fill-in piece and light socket are brazed in. Next, thoroughly clean area with grinder.



9. With surface clean, tin, melt on stick lead and contour lead with wooden paddle.



10. Smooth and contour complete working area by hand-filing surface with vixen file.



11. Surface is now blocksanded, cleaned with wax-grease remover and metal prep.



12. Apply heavy coats of primer, then sand out. Repeat 'til surface is perfectly smooth. ➔

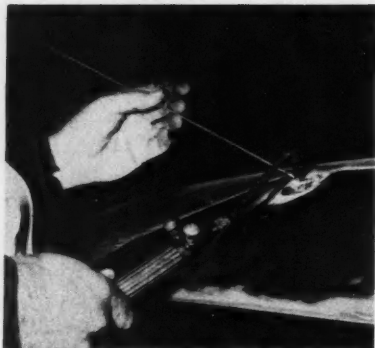
REMOVING DECK TRIM



1. Remove the deck trim and grind paint from surface with a 24 close coat disc.



2. Metal plug is used to fill large holes, countersink small holes then braze close.



3. When brazing apply a wet pad to surface from time to time, minimizing warpage.



4. Areas that are warped can now be worked out by using a picking block and hammer.



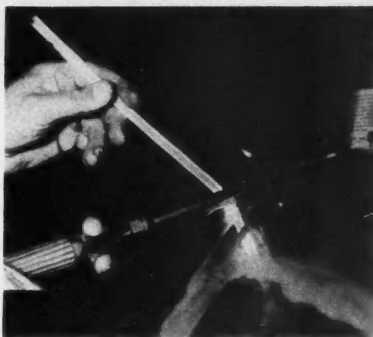
5. Surface is now filed smooth with vixen file. File from three different directions.



6. Clean surface with grinder, then thoroughly clean brazed areas with rotary brush.



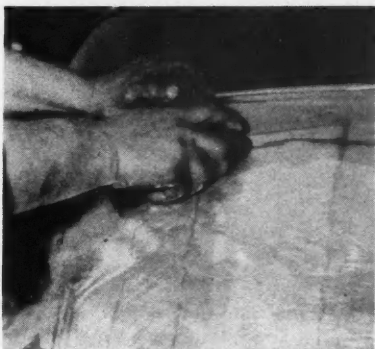
7. Using soft torch heat, scrub tinning compound on with a small steel wool pad.



8. With surface thoroughly tinned, melt lead onto surface and contour with paddle.



9. Smooth surface with vixen file. Low spot appear by filing in different directions.



10. Deck is now blocksanded and feathered with 220 sandpaper (wet), 80 (dry).



11. Metal prep is applied to bare metal and wax and grease remover to old paint.



12. Prime surface with heavy coats, then blocksand. Surface is now ready for paint.

'49-'50 FORD TAILLIGHTS

AS THE YEARS roll by, it's really strange to see once-popular makes and model cars disappear from the custom scene. On the other hand, there are some that actually become classics. There isn't a custom fan or a hot rod enthusiast alive that doesn't have a warm spot in his heart for the ol' '32 Ford or the '36-'40 and a couple of later models. It seems we have another model that doesn't want to die off, but is heading for the classic honor roll.

It's been on the popularity poll every year since it was first introduced to the younger set, and every year we seem to get a completely

different-looking breed from it.

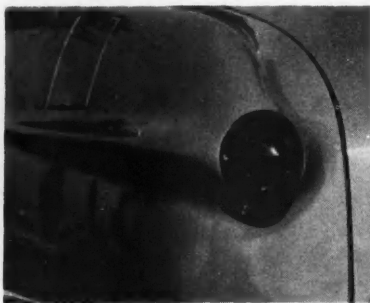
The '49-'51 Ford has been customized more than any other car brought out in the last six years. Every time you think you have seen the ultimate approach to restyling one of these models, you get foxed and see another decked out in completely different garb.

Grab Bag this month deals with some of the tricky treatments on taillights for this particular model. It just goes on, an' on, an' on—*ideas, we mean.*

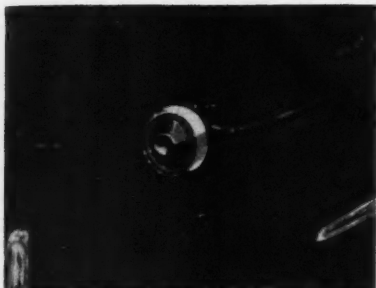
GRAB BAG



1. The first and the simplest approach to restyling the '49-'50 taillights was to french them into opening (July '55 CAR CRAFT).



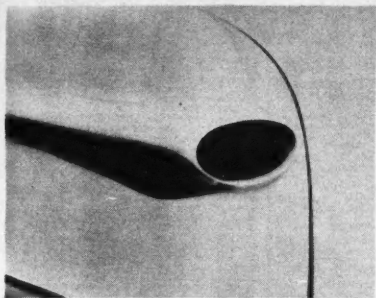
2. The next gimmick that came along was to enlarge the opening slightly and incorporate a plain '53 Oldsmobile taillight lens.



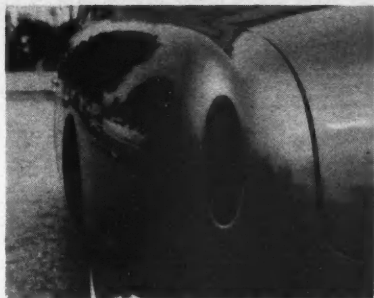
3. Along the same theme is this idea of using the lens from a '49-'52 Pontiac. It requires enlarging the opening just slightly.



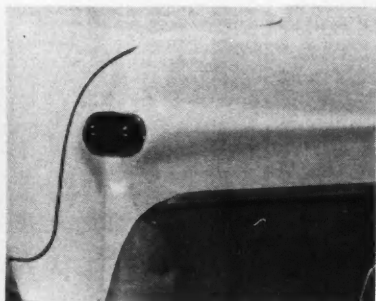
4. The Pontiac lens has proved popular in many cases. Here, the large and deep '53 Pontiac lens has been frenched into fender.



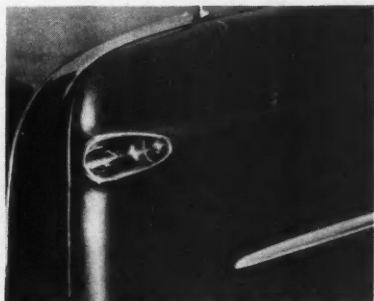
5. Here, a new flange was built onto stock taillight's flare and '50 Packard lenses were cut down and recessed into the opening.



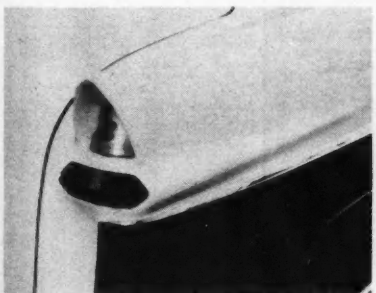
6. One of the most unique approaches to restyling this particular taillight is this innovation of installing the unit vertically.



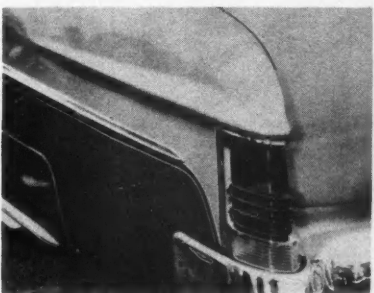
7. Another lens that worked out as popular as the Pontiac was the '50-'53 Buick lens with its double bubble design as shown.



8. One of the most original ideas we've seen in some time is this cleverly hand-made aluminum housing with Buick lens.



9. Two '49 Merc taillight lenses cut in half and then spliced together in novel arrangement. Upper lens is '53 Chevy back-up lens.



10. Although it might look impossible (installing the large '54 Merc lens into the '49 Ford's fender), this is the outcome.

Two Pages of Order-By-Mail Bargains from J. C. WHITNEY



Porous Bronze OIL FILTER ELEMENT

WITH LIFETIME GUARANTEE and Built-in Magnesium Acid Neutralizer

Porous bronze Element never wears out or needs replacement. Lasts for a lifetime at the car. Element removes all harmful particles yet retains your expensive additives. Lets you drive up to 10,000 miles without changing oil. Fits all cars except those with Full Flow Oil System listed below. State year, make, model of car.

No. 114—Regular \$6.95. Element only, **POSTPAID**..... **\$4.95**

POROUS BRONZE FILTER ELEMENT FOR FULL FLOW OIL SYSTEM—Fits V8 Buick, Olds, DeSoto 52-55; Ford, Merc. 54-55; Chry. 51-55; Dodge 52-55; Plym. 1955; Ford 51-52-55; Lincoln 52-54; Chry. exc. V8 46-54. State car, year and model. No. 117—Regularly \$12.95. **\$8.95**

"Hollywood" WOLF WHISTLE



Intake Manifold Whistle! Gives the Wolf Call, Imitates a Barking Dog and other Effects. Precision built—a reliable signal and is adaptable and ideal for Autos, Trucks, Motorcycles, Motorboats and Outboard Motors. Simple to install—works off the intake manifold.

No. 61—Postpaid Each..... **\$3.42**



Cadmium Silver Connecting Rod BEARINGS

For Ford 43-48—Mercury 39-48

Less likely to scour crankshaft. Excellent heat transfer (Can be used in Ford & Mercury 49-52 by using 29A Rod). Furnished in following sizes:—Std., to .030. State size wanted. No. 274—**POSTPAID**, Pair..... **\$3.39**

AM-000-GAH Chromed HORN



Here it is for the sport car enthusiast. Not a vibrator or other substitute but a genuine motor driven horn.

Postpaid No. 66-6 VOLTS, 12 VOLTS State Voltage Needed..... **\$12.60**

BULL NOSE ORNAMENT



For Customizing the Ford 47-55, Chev. 47-55 Mercury 49-51 and Plym. 47-55. **CHROME PLATED**

Replaces factory hood ornament. Blends properly into molding. No. 47—**POSTPAID** each only..... **\$1.95**



DEEP TONE MUFFLERS

Increases horsepower, increases gas mileage, straight-thru construction, no back pressure, no high pitch irritating noises, deep powerful non-offensive tones. Specify make and model car. Stock No. 37—**POSTPAID**..... **\$4.95**

Flared FENDER SKIRTS

All metal. Choice of Prime or Chrome Plated finish. Rubber beading. Fits following cars:

49-54 Chev.	49-51 Ford	49-50 Olds	76, 88
exc. Bel Air	1955 Ford	46-52 Plymouth	
46-54 DeSoto	46-54 Fords	49-52 Pontiac	
46-52 Dodge	46-54 Kois	52-54 Willys	
No. 59—Pair.....	\$6.75 CHROME	No. 289—Pair.....	\$14.95

For 1952-54 FORD & MERCURY

PRIME \$9.74 CHROME \$14.95

No. 83—Pair.....

For 1955 CHEVROLET

PRIME \$11.95 CHROME \$14.95

No. 118—Pair.....

For 1955 MERC.—PRIME No. 119—Pr. \$8.50

For 1953-54 PLYMOUTH

PRIME \$6.57 CHROME \$14.95

No. 120—Pair.....

For 1955 PLYMOUTH

PRIME \$8.95 CHROME \$14.95

No. 121—Pair.....

State year, make and model of car

Ford-Merc Montclair DRESS UP TUTONE TRIM KITS



For 49-55 Fords and 52-55 Mercury

Gives Montclair Look for all models. Complete kit with easy to follow directions. Makes perfect separation for contrasting color tone. Stainless steel for lasting beauty. State year, make and model. No. 112—**POSTPAID**, each..... **\$7.50**

CHECKERED FLAG EMBLEM



Die Cast... Triple Chrome Plated! No Holes to Drill... Just remove backing and apply on: Auto Hoods, Fenders, Trunks, Doors, Etc. 4" Wide, 1 3/4" High. Black and Chrome. No. 57—**POSTPAID**—Each..... **76c**

NEW FIBERGLASS CUSTOMIZING KITS ALSO FILLS IN SPOTS, HOLES AND RUSTS OUTS

Has new Fiberglass material, tough plastics and resins that reinforce and become as strong as steel. It's so easy and simple to do a customize job, or repair any part all the car body. NO LEADING, NO WELDING, NO SOLDERING. No Special tools. Stock No. 19—Kit and Materials to Cover 3 sq. ft. **POSTPAID**..... **\$3.78**

Sparkling Chrome Plated ROCKER ARM COVERS



Top off your engine with gleaming beauty! Easy to install; just remove old cover and gasket from head, put down new gasket and attach. Necessary gaskets included.

276—Chevy V8, 1953 Super & Roadmaster oil 54-55..... Pair **\$17.75**
277—Chevrolet 6, 37-55..... Each **8.95**
278—Chevy 8, 55; Olds 8, 51-55..... Pair **13.90**
279—Ford 6, 52-55..... Each **13.90**
280—Ford 8, 54-55..... Pair **19.95**
281—Olds 8, 49-50..... Pair **10.50**

REAR-VIEW MIRRORS

Eliminates Blind Spots — Wider Range of Vision than the Larger Side View Mirrors of New Cars. CURVED MIRROR—2 1/2" x 4" in Metal Case Painted a Neutral Gray Hammered Finish with a Plastic Rim to Match. No. 90—All cars. One stand year, make & model. **\$2.94**



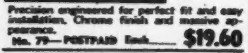
EXHAUST CUT-OUT

Exhaust flow is controlled from the dash. Can be used as a cut out in the country and closed in restricted areas. Or may be used to operate two different toned mufflers. Well constructed of heavy plate steel. Strengthens the exhaust pipe. UNIVERSAL—Fits All Cars. No. 66—**POSTPAID** Each..... **\$3.42**



Custom Grilles for 49-51 Ford

Will replace standard grille on all Fords 49-51. Made of heavy gauge steel. Precision engineered for perfect fit and easy installation. Chrome finish and massive appearance. No. 79—**POSTPAID** Each..... **\$19.60**



HI-SPEED ELECTRIC SHIREN

Developed especially for U. S. Navy & Coast Guard. Now used by hundreds of Fire police departments, buses, ambulances, etc. Complete with bracket, screws, 1 ft. of cable & push button. Green Enamel. No. 71—Postpaid-6 VOLT..... **\$13.24**

No. 91—Postpaid-12 VOLT..... **\$13.70**

Specify Voltage on

Custom Built Dual Exhaust Sets



Dual exhaust systems guarantee more horse power, save your gas, let your engine breathe properly. Eliminates costly back pressure. Great for your car, road-up-to-date "zip". Choice of regular, Hollywood Steel packed or Deep Tone Fiberglass Mufflers. All custom built. Easy to install with complete instructions. Be sure to state year, make, model, body style of your car. Also state if you have power brakes, power steering, standard or automatic transmission.

DUAL EXHAUST SETS

	No. 265	No. 266	No. 267
Box	1 Box	2 Box	2 Box
Butterfly	Butterfly	Butterfly	Butterfly
Box	\$15.75	\$27.95	\$31.45
Box	\$28.46		
exc. convert.	12.85	22.85	24.95
Chry. 1955	11.35	17.95	21.85
exc. convert.	18.75	42.90	44.40
DeSoto 52-54			
exc. convert.	12.95	29.65	29.35
Ford V8, 35-53	9.75	15.25	19.85
Ford V8, 54-55	10.85	17.90	22.85
Lincol. 49-51	14.95	24.95	25.95
Lincol. 52-54	19.90	40.35	42.75
Mercury 39-53	18.45	17.35	19.85
Mercury 54-55	12.45	22.15	21.55
Olds 49-53	12.45	19.95	23.85
Olds 54-55	12.85	20.35	25.35
Pont. V8, 55	12.35	20.95	24.35
Plym. V8, 55	12.35	19.75	22.45
Stude. V8, 51-52	14.25	22.25	24.95
Stude. V8, 53-54	15.25	21.15	25.95

J. C. WHITNEY & CO., 1917 C28 Archer Ave., Chicago 16, Ill.

SAVE UP
TO 50%.

—Fast Service and 100% Satisfaction Guaranteed.

High Compression Head Gaskets



EXTRA-THIN .020" SOLID COPPER
These copper gaskets are only .020" thick. It is the same as milling heads .040" to .050", and "hope up" the motor to give amazing acceleration, power and mileage.

State exact year, make and model when ordering. (If car is V8 type use gaskets are furnished at no extra charge.)
Stock No. 21 POSTPAID \$4.95

BERMUDA

CLANGING BELL

It's the New "Bage"! Gives a most amusing and commanding two-tone bell sound. Easily installed under car floor by driver's seat. Step on plunger. 5 1/2", highly polished. Fits any car.
Stock No. 49 POSTPAID \$3.95



New "Jet-Flo" BUMPER GUARDS

EXHAUST AND BUMPER GUARD COMBINED

Gives the Appearance of Duals on Single Exhaust Systems



Complete bumper guards, with adaptor pipes included. EASILY INSTALLED, just remove old bumper guards and replace with JET-FLO'S. For Ford '49 thru '54 For Chev. '49 thru '52
Stock No. 39 POSTPAID \$14.95

EXHAUST HEADER AND DUAL MUFFLER SETS



These sets are the most efficient and finest made—so designed and constructed to—
• Increase Horsepower of Least 10%
• ELIMINATE BACK PRESSURE
• Give Higher Top Speed • Better Idling
• More Miles per gal. Smooth Performance
• Precision Built for Easy Installation
Superior in every way because they are—
• Constructed of Heavy Gauge Steel.
• Designed with smoother curves for easy flow of exhaust.
• Ground Flanges for perfect alignment and leakproof installation.

You can install this set in less time because it is made with special longed holes for easy adjustment. Check our low prices
• Dual Side Tail Pipe • Pair Headers
• Clamp Set • Pair Extensions
• Easy-to-follow instructions
Choice of Headers without Mufflers, with 2. Hollywood Steel Packed, with 1 regular, or with 2 glass packed mufflers.

CUSTOM DUAL HEADER KITS

CAR & YEAR	No. 268 No. 269 No. 88 No. 270	1 Reg. 2 Steel 2 Glass
Buick 33-35	\$33.95 \$44.95	\$68.10 \$43.35
Cad. 50-51	44.95 53.28	56.95
Chev. 1955	37.45 43.93	47.95 47.35
Dodge 53-54	31.96 63.85	63.25 61.40
Ford V8 35-53	26.45 31.95	36.15 36.35
Ford V8 54-55	32.45 39.35	43.45 43.35
Lincoln 49-51	43.95 44.95	44.95
Lincoln 52-54	40.95 54.95	43.75
Mercury 35-53	36.45 31.95	36.15 36.35
Mercury 54-55	32.45 39.35	43.45 43.35
Olds. 49-55	34.45 41.55	45.45 44.35
Plym. 1955	34.50 43.15	44.45 44.35
Stude. 51-52	40.30 46.25	51.25 50.30
Dodge 53-54	32.45 39.35	43.45 43.35
Coupe	32.45 39.35	43.45 43.35

Be sure to give make, year, model, body style & state if you have Power Brakes, Power Steering, Standard or Automatic Transmission.

J. C. WHITNEY, INC.
1917 C 28 Archer Ave. Chicago

QUAD CARBURATOR ADAPTERS

For mounting QUAD Throat Carburetors on manifolds now using 4 bolt dual throat or 3 bolt dual Ford type carburetors. All of High Quality Cast Aluminum. Precision made for perfect adaption... Polished to high chrome like lustre.
• BOLT DUAL TO QUAD CARBURATOR
No. 212 POSTPAID \$5.40
For Ford V8 32-54 & Chevins with 3 Bolt dual throat Carburetors. State Year, Make & Choice of 3 or 4 Bolt.

DYNA Highly Polished Aluminum CARBURATOR SUPERCHARGER

Easily installed. Complete with gasket cap, screws & instructions. A highly efficient mixing chamber that actually mixes gas and air with volcanic force. Lowers the fuel-air temperature 50 to 60 degrees, allowing the mixture to enter carburetor before condensation takes place.
• INCREASES MILEAGE
• INCREASES POWER
• GREATER ECONOMY
• GREATER HORSE-POWER
• Eliminates "PING"
Many owners report complete absence of "Ping" due to uniform fuel dispersion, even with low test fuel. For All Cars.
No. 101—Each POSTPAID \$23.60

Electric TRUNK KIT

This Electric Trunk Release Kit enables the Custom Car Owner to open his trunk from inside the car by the touch of a button. Easily installed. Kits come complete with illustrated instructions.
For 36-53 Ford & Mercury. All C.M.C. 49-52 except #50 Oldsmobile '52.
No. 76 POSTPAID \$6.56

PLYMOUTH, DE SOTO, DODGE, CHRYSLER DUAL POINT PLATES

A Double-thrust Self aligning Bearing Distributor Plate Assembly. Quicker starting. More power. Better performance. Greater oil saturation. Smooth or acceleration (at all speeds). Greater gas mileage. Longer spark plug life. Thinner spark assures complete combustion.
Stock No. 14 POSTPAID \$4.95
Stock No. 46—49-53 Ford V8 & Merc—33-54 Chev. Buick Olds & Pont.—37-49. \$3.95 each POSTPAID

HOT ROD FENDERS

Use in Custom Re-Designed Autos, Trailers, Cycles and other Motor Equipment. Study—Light—Durable. Made of 20 gauge steel. Combined to fit all automobile tires. Universal mounting brackets adapt to standard brake back-plates. Price ready to paint.
No. 31 \$8.95

HOW TO ORDER:

Send payment in full or 25% deposit with order. Balance C.O.D. When payment in full accompanies order, we pay shipping charges on items marked Postpaid. Other F.O.B. Chicago. Be sure to give make, year and model of car. 100% SATISFACTION GUARANTEED or Money Refunded.

Convert Black Tires to White Side Walls or to Pastel Colors

SIDE WALL TIRE DISCS
NOT A PAINT
Choice of Genuine 100% White Latex Rubber or 4 Beautiful Pastel Colors. Can be put on in a minute by anyone. Permanent Adhesive Process.

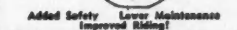
Fits all 13" and 16" Tires
Every black tire can become a luxury accessory with very little effort. Kit comes complete with cement, roller and all other necessary accessories for Simple and Easy Installation. Once on the tire, it will not peel off.

WHITE SIDEWALLS
No. 106—Set of 4 POSTPAID \$9.95
No. 296—Set of 5 POSTPAID \$11.95
New 1955 "KOLORWALLS"
Choice of Light Blue, Light Green, Yellow or Pink. Be the first to have these colors. State color wanted.
No. 287—Set of 4 POSTPAID \$11.95
No. 288—Set of 5 POSTPAID \$13.95

SENSATIONAL NEW IMPROVEMENT!

"TRACTION MASTER"

Prevent Front-End "Dive" When Stopping. Increased Traction When Starting.



Added Safety Improved Braking!
"Traction Master" gives amazingly INCREASED TRACTION when starting—PREVENT FRONT-END "DIVE" when stopping—Eliminates driveline "lump" 100%! Prevents axle housing from rotating. Up to 40% QUICKER STOPS! Safer smoother ride. Much longer life for brake lining, springs, shock absorbers; U-joint and axle. Fits cars with leaf-type rear springs. Fits: DeSoto, Dodge, Plymouth, Olds, 49-54; Chev. 55; Ford 49-55; Hudson 52-54; Olds. 51-55; Studebaker 53-55. Specify car, year, model and stock No. when ordering.
No. 125—Per Pair \$39.95

BODY OR FENDER MIRROR

ADJUST THE RING! ADJUST THE HEAD!
Fits on the body or fender, right or left side, of all cars. 4" replaceable head, 4 1/2" diam. chromed ring. Non-glass glass mirror.
No. 133—each POSTPAID \$4.79

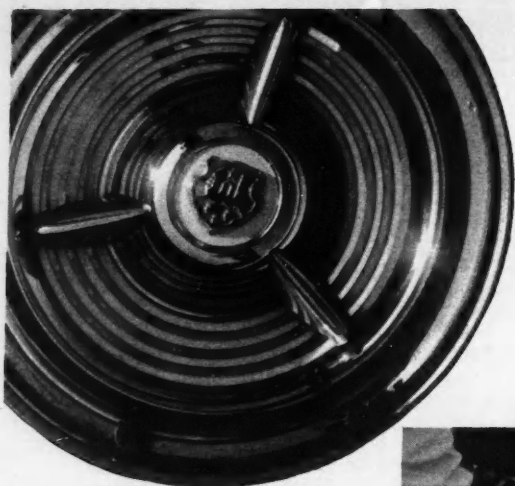


ORDER NOW!

This giant 148 page catalog, packed with over 50,000 items for the automotive, truck, taxi, hot rod and custom car owner... is yours FREE with any order for items selected from this advertisement. If you just want the catalog, send only 25c to cover part of handling and mailing cost (refunded on your first order).

Get Your Own Copy of Money Saving NEW 148 PAGE Auto Parts and Accessory FREE! CATALOG

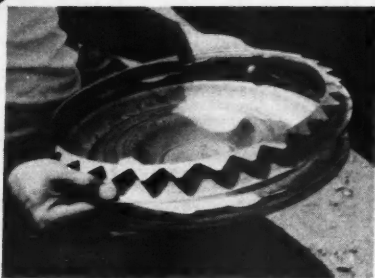
Get Your Own Copy of Money Saving NEW 148 PAGE Auto Parts and Accessory FREE! CATALOG



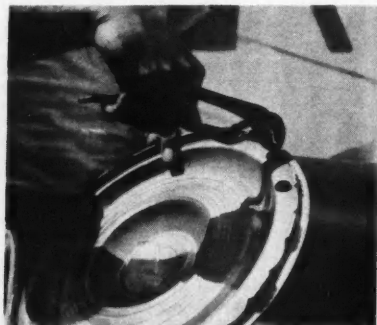
THE HUBCAP TRICK

The popular hubcaps never seem to fit—but they will when you know how

ALL OF US have gone through the exhausting ritual of trying to adapt hubcaps from another make of car to our own little jewel's wheels. In most cases the outcome is sheer exasperation. Sometimes you can get real lucky; you manage to get the hubcaps to just barely fit and when turning the first corner at speed one twangs off, barely missing the old lady waiting at the corner bus stop, and finally comes to rest inside the corner television store by way of the front plate window. Hubcaps are strange items. Some makes fit right up to the wheel you propose to use them on, while others don't even come close. The trade secret that follows of how to fit up cap combinations is from the Barris Brothers Custom Shop. It deals with caps that have a hollow center section so to speak. The beauty band is the sole secret to the trick and must be one that is ribbed. You can find this type of beauty band at automotive accessory stores and on some of the early '49-'50 models of Chevy and Ford that have 15-inch wheels. The best method to go about switching hubcaps is to select the type you wish to use, and then if they don't fit, follow these simple directions.



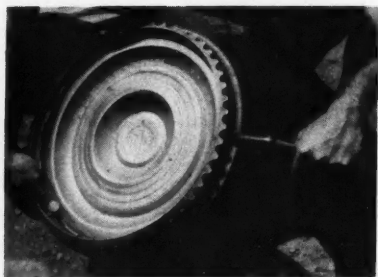
1. First step is to match up the hubcap and beauty rim to innertube's valve passage.



2. Now take pliers and bend each of the attachment prongs of the hubcap out straight.



3. Each prong is now hammered back toward center of cap at a 45-degree angle.



4. Beauty rim is now aligned to hubcap and clamped solid with a pair of vise-grips.



5. With rim and cap clamped together, secure them with metal screws or by brazing.

AUGUST 1955

IT'S EASY TO INSTALL "TRAFFIC-LIGHT" SAFETY ON YOUR CAR!



FULLY AUTOMATIC JET WARNING SIGNAL LIGHT

REG. \$9.95 **NOW** \$3.95

Touch your brake pedal . . . it flashes a warning red; step on the gas . . . your Jet Light beams go-ahead green; release the accelerator . . . and you signal amber! A life-saving accident preventive that adds streamlined beauty to any car. Don't take chances . . . Install it yourself in a jiffy.

- Wear and weather-resistant extra-heavy chrome plate!
- Mounts on trunk like a rear-view mirror . . . no holes to drill!
- Theft-proof, too!

MONEY BACK GUARANTEE!

SEND CHECK OR MONEY ORDER
POSTAGE PREPAID



Free "Soup-Up"

Big Automotive Catalog Your car's Power, Mileage, Style!

THOUSANDS of new speed, power, safety economy racing and custom equipment—all cars. Power boosters, superchargers, dual exhausts, manifolds, heads, cams, dress-up accessories. New low factory prices FREE personal instruction. Write today to ALMOUST ENGINEERING, DEPT. CC-8 HILPERS, PENNA.



CUSTOM CRAFT

WRITE NOW! For Our Colorful Illustrated Wall Chart (17" x 22"). The World's Most Complete Line of CUSTOM GRILLES and GRILLE CONVERSION KITS. All Manufactured in Our Own Factory. Accessory, Hot Rod, Chain Stores, etc. (Dept. CC)

DETROIT GRILLE MFG., CO.
258 E. VERNOR, DETROIT, MICH.

WHOLESALE SPEED PARTS FOR ALL CARS

Send 25¢ for new retail and wholesale CATALOG and FREE SPEED KIT

HONEST CHARLEY SPEED SHOP

Box CC 3086, Chattanooga, Tenn.

NEW CATALOG

"What's Your Problem?"

By Chuck Eddy

COILS FOR EARLY CHEV

Dear Sirs:

I have a '38 Chev with knee action front end. I've been told that a '39-'40 Chev front end with coil springs would fit in without very much trouble. What difficulties would I have as far as installing is concerned?

Thank you,

Jim Hill

Mission San Jose, Calif.

We have seen roadsters with complete '40 Chev coil spring front ends. Seems as though the whole '40 front crossmember can be put on with very little trouble and the entire front suspension fastens to it.

GETTING THE POINTS

Dear Sirs:

Just about a year ago, a series of articles appeared in CAR CRAFT on how to make a Zephyr distributor conversion for Fords and Mercs. Well, it took me a long time to get started, but I am finally under way. I am making a hot distributor. Everything went without trouble until I tried to get some Bendix-Scintilla breaker points. I have had every parts house and auto electrical dealer in the area looking for them, and none have been able to even get near a set. Can you tell me where to get a set? If you can't give me a line on them, I guess I will have to try a set of double sprung 11-A points. This would be a big comedown, though.

Thanks for any help you can give me.

Gene R. Bolan

Duarte, Calif.

The points you are looking for can be bought from Moon Automotive at 10935 South Bloomfield Avenue, Norwalk, Calif. Price is \$4.00 per pair.

A-BONE QUERY?

Dear Sirs:

In the May '55 issue of CCM there were illustrations on how to put tubular shocks

on a '29 Model A. Being a present owner of a '29 Model coupe, I would like to know the approximate cost of these shocks and how much trouble it would be to install them myself.

I would also like to know if a '29 transmission will hold up under a V8 Ford.

Yours truly,

Gerald Cox

Jacksonville 2, Florida

Write A. J. Swanson, 1526 North Ivar in Hollywood, California for shock prices. If you have access to an arc welder, the job is fairly simple. We would recommend the V8 transmission over the "A" box. It's much sturdier and has synchromesh second and high gear.

TRANSMISSION FOR OLDS-FORD

Dear Sirs:

Concerning the article "Big Gears for Big Engines" in the January '54 issue of CC, what modifications would be necessary to use this ('37 Caddy) gearbox in a '49 Ford with '50 Olds engine? Would this box work out well with column shift? As my car will be mainly for the street, I would like to use the column shift. Is this as good as the floor shift? Could you suggest a place where I could get the necessary machining work done?

I don't want to use the Ford transmission as they have a habit of scattering when they take too much power. The Caddy box seems just the ticket but I would like to know how much loot I will have to lay out before I buy the box.

Thank you very much,

Tom LeClair

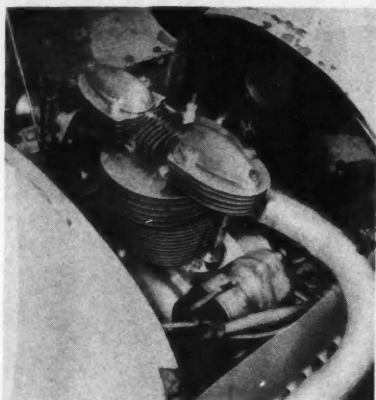
Donora, Penna.

The '37 Cad box with floor shift has the advantage (some people feel) over the column shift box when it comes to a fast shift. If this is of minor importance to you, use a '38 or later Cadillac gearbox since they are of the column shift variety and the internal pieces are the same. For use in a car with an open drive line, such as your '49 Ford, the Cad gear box and internal parts need not be altered but the drive shaft length will have to be changed.

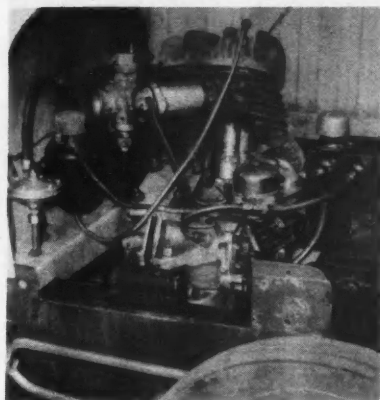
If you have a stock '50 Olds transmission bell housing, the Cad box will bolt to it direct. Otherwise obtain a Cad bell housing which will bolt right on. The Ford column shift linkage is easily adapted to the Cad gear box.

MICRO MIDGETS

continued from page 23



15 cu. in. Indian Arrow engine has been used with success. Engine is positioned sideways driving directly off engine sprocket.



Here is typical 45 cu. in. Harley-Davidson engine running micros. One cylinder is removed and covered with plate. Carb is Amal.

GOOD SHOCKS ADD STABILITY AND SAFETY TO ALL CARS



Winners of Mexican Road Race—3 years—and 33 qualifiers in '54 Indianapolis '500,' WERE EQUIPPED WITH OUR SHOCK ABSORBERS



CAR	YEAR	FRONT	PR. per unit	REAR	PR. per unit
Buick	1937-53	Knee Action	11.00	Lovejoy	10.00
Buick	1954-55	Gab. Adj-O-Matic	7.95	Lovejoy	10.00
Chevrolet	1939-49	Knee Action	11.00	Lovejoy	10.00
Chevrolet	1950-55	Gab. Adj-O-Matic	7.95	Gab. Adj-O-Matic	7.95
Cadillac	1937-49	Knee Action	14.00	Lovejoy	10.00
Cadillac	1950-55	Gab. Adj-O-Matic	7.95	Gab. Adj-O-Matic	7.95
Chrysler	1937-55	Gab. Adj-O-Matic	7.95	Gab. Adj-O-Matic	7.95
DeSoto	1937-55	Gab. Adj-O-Matic	7.95	Gab. Adj-O-Matic	7.95
Dodge	1937-55	Gab. Adj-O-Matic	7.95	Gab. Adj-O-Matic	7.95
Ford	1929-47	Rebuilt Hoodye	6.00	Rebuilt Hoodye	6.00
Ford	1929-47	Gab. Adj-O-Matic		Gab. Adj-O-Matic	
		Kits . . . per pair	22.45	Kits . . . per pair	22.45
Ford	1948-55	Gab. Adj-O-Matic	7.95	Gab. Adj-O-Matic	7.95
Hudson	1934-55	Gab. Adj-O-Matic	7.95	Gab. Adj-O-Matic	7.95
Lincoln	1949-55	Gabriel Silver E.	9.75	Gabriel Silver E.	9.75
Mercury	1948-55	Gab. Adj-O-Matic	7.95	Gab. Adj-O-Matic	7.95
Oldsmobile	1937-50	Lovejoy Knee Action	11.00	Lovejoy	10.00
Oldsmobile	1951-54	Lovejoy Knee Action	11.00	Gab. Adj-O-Matic	7.95
Oldsmobile	1955	Gab. Adj-O-Matic	7.95	Gab. Adj-O-Matic	7.95
Packard	1936-50	Knee Action	14.00	Gab. Adj-O-Matic	7.95
Packard	1951-55	Gab. Adj-O-Matic	7.95	Gab. Adj-O-Matic	7.95
Pontiac	1937-49	Knee Action	11.00	Gab. Adj-O-Matic	7.95
Pontiac	1950-55	Gab. Adj-O-Matic	7.95	Gab. Adj-O-Matic	7.95
Plymouth	1937-55	Gab. Adj-O-Matic	7.95	Gab. Adj-O-Matic	7.95
Studebaker	1938-50	Rebuilt Hoodye	6.00	Rebuilt Hoodye	6.00
Studebaker	1951-55	Gab. Adj-O-Matic	7.95	Gab. Adj-O-Matic	7.95
All Gabriel Silver E Shock Absorbers			9.75	Gabriel Silver E.	9.75
Gabriel Non-Adj. Hydro Shox			6.75	Gab. Non-Adj. Hydro Shox	6.75

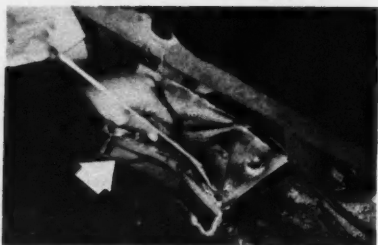
A. J. SWANSON CO.

Specialists in Shock Absorber Sales and Service
1526 North Ivar Avenue, Hollywood 28, California

C-FRAMING continued

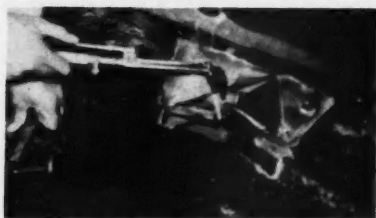


1. Remove seats and floor mat. Air chisel is used to split body flooring up middle.

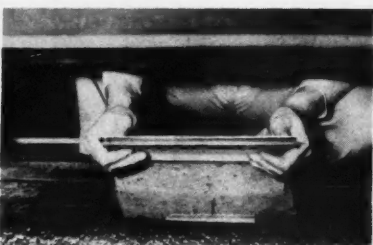


5. In opening over rear end, weld in a contoured brace for added flooring support.

DRIVESHAFT TUNNEL

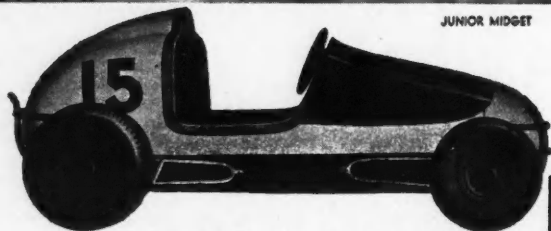


2. Torch or air chisel can be employed to cut flooring open over the differential.



6. Section of flooring that has been cut is now formed in box contour (see step no. 7).

For Racing at its Thrilling, Exciting Best



Dealers
Inquiries
limited

Get in on Micro-Midget racing, America's newest, most exciting, and fastest growing sport. Speeds up to 30 M.P.H. on a 1/10 mile track.

Can be purchased in kit form or complete ready-to-run. Send 25 cents for completely illustrated literature describing all details.

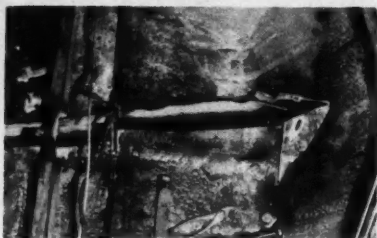
JUNIOR MIDGET

- 6 H.P. High Speed Engine
- 50 M.P.H. Top Speed
- Soundly Engineered
- Precision-Built
- Compact Sturdy Construction
- Moderately Priced

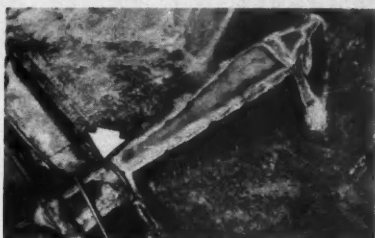
Now available, the **HANDBOOK for SMALL RACING CARS**. This handbook is the most complete of its type ever printed and has articles, plans, specifications, engine information, track and racing data, all rules and regulations, etc for 1/4 Midgets, Micro-Midgets, and 1/8 Midgets, only \$1.00.

COMET MANUFACTURING CO.

DEPT. C-8, P.O. BOX 1882 SACRAMENTO 9, CALIF.



3. After flooring has been split open as shown, it is then pulled back and upward.



4. Sheet metal is welded in to cover opening. Brace (arrow) is welded in for support.



7. Differential floor housing should be boxed in to look like this boxed tunnel.



8. Here is the completed job after being undersealed. Seats need slight modification.

AT LAST YOU CAN ENJOY

Custom **Ride Control!**



Gabriel AJUSTOMATIC Shock Absorbers are easily and quickly adjusted to give any driver the degree of control he may desire. Just turn, a "click" and the ride you want is yours! Ask your dealer, or write to—

THE GABRIEL COMPANY
CLEVELAND 15, OHIO

**NOW! AVAILABLE: HIGH OR
LOW ZEPHYR GEARS FOR
'49-'54 FORD AND MERC**

'49-'50 Ford 25T or 26T.....	\$47.50
'51-'54 Ford & Merc 25T or 26T for overdrive transmissions only	
Complete set of gears (5 pieces).....	\$45.00
'40-'48 Ford & Merc 25T-Hi.....	\$40.00
'40-'48 Ford & Merc 26T-Lo.....	\$37.50
'49-'54 Ford & Merc Hi Speed Set.....	\$42.50
(Special ratio for stock engines)	

Prices F.O.B. 50% deposit on C.O.D.

**"CUSTOM BUILT" CLUTCHES TO ORDER
DRAG, COMPETITION OR STREET USE**

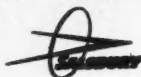
A. E. TRANSMISSION CO.

237 E. Market St.—
Long Beach 5, Calif.

Phone: L.B. 26575

Make money!
**ADDRESS and MAIL
POSTCARDS at HOME**
Write today!
MR. KAY, BOX 14, BELMONT, MASS.

BE A MICRO MIDGET WINNER



with a 6 h.p.

AIR COOLED ENGINE

EMERY ENGINEERING CORP.
4395 East Olympic Blvd., L. A., Calif.

COMING . . .

NEXT MONTH

★ ★ ★

- Special Interior Issue
- Tips on Driveshaft Shortening
- Restyling the '51-'52 Chevy

BENCH RACIN'

(Continued from page 4)

formance. And, quite frankly, this is the only way to avoid "overgearing" in high and still retain good performance in the intermediate gears.

The above transmission ratios, unfortunately, are confined to Ford transmissions from 1939 through '48, to Mercury from 1939 through '50 and to Lincoln Zephyrs and Continentals, using practically non-existent FoMoCo parts. However, by use of a few special parts developed by the A. E. Transmission Co., of Long Beach, California, the same gearbox ratios are again relatively plentiful and inexpensive for the above transmissions. In addition, for a few bucks more, these ratios may be used in 1949 through '54 Ford and 1951 through '54 Merc synchromesh and overdrive transmissions. Another gear set, consisting of a 2.32 low gear ratio and a 1.58 second, may be had for the post '49 Fords and post '51 Mercs.

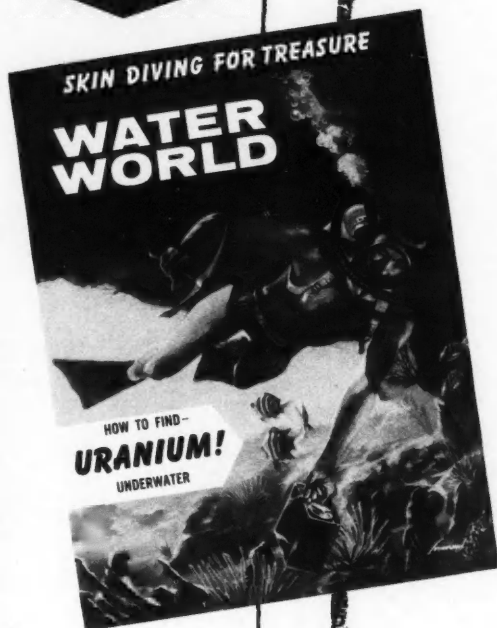
Correct gearing is also a vital point at the quarter-mile drag strips. The boys who get to the finish line first are inevitably the ones who make but one shift along the route. Additionally, they are the ones who run the engine speed from 15 to 25% past the power peak at the finish line. In other words, if an engine produces maximum power at 5000 rpm, the car is geared so that the engine speed is between 5700 and 6200 rpm as the car crosses the finish. Of course, the transmissions of such cars are geared to produce the most effective ratio for getting out of the "hole" quickly and with a minimum of wheelspin from a standstill.

Finding the correct rear end-transmission-engine component combination may very possibly require some experimentation because there is no iron-clad formula that covers all cases and, to be sure, gears are not too cheap. Perhaps the most inexpensive method is to juggle tire diameters around, using tires that are relatively wide, made from soft materials and fairly low inflation pressures for the best "bite."

Those who are interested in good performance on the street and those who aren't as yet convinced that all this gear-talk isn't just so much hogwash have my most cordial invitation to try it and see.

A NEW FRONTIER OF SPORT AND ADVENTURE

Introducing



A new monthly magazine reporting on all aspects of skin-diving and spear fishing!

SKIN DIVERS all over the world are exploring this new under water frontier—a new realm of excitement and adventure . . . whether you are a veteran skin diver or an armchair enthusiast you will enjoy following this exciting sport each and every month in the pages of WATER WORLD.

**Take advantage of
this special introductory
offer**

5 big issues for \$1.00

WATER WORLD

5959 Hollywood Blvd., L.A. 28, Calif.

I am enclosing \$1.00 for five issues of
WATER WORLD Magazine.

☐ M.O.

☐ Check

☐ Cash

Send to:

name _____

address _____

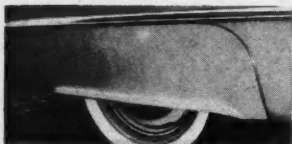
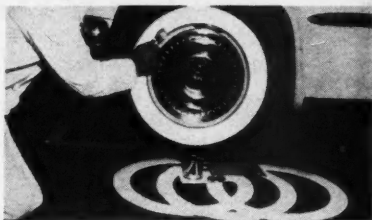
city _____

zone _____

state _____

Auto Discount SALE!

NEW SUPER DELUXE WHITE SIDEWALL KIT
Change your blackwall tires to pure-white sidewalls permanently with these 100% pure latex rubber rings. They won't come off at any speed, in any weather—hitting curbs won't loosen them. Anyone can apply properly by following simple directions. Super deluxe kit contains 4 whitewall rings, special adhesive, brush, roller, sandpaper, instruction sheet. Special price only \$8.50 (with 5 rings, \$10.50). Item #1C.



SUPER DELUXE FLARE FENDER SKIRTS

All of heavy-gauge steel, with concealed rubber liner. A cinch to install. Lever locking. Primed for finish paint. Available for (specify):

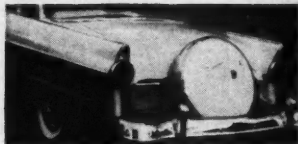
36-35 Ford	35-54 Pont	35-41 Buick
39-54 Merc	35-53 Dodge	50-53 Buick
36-55 Chev	35-54 Ply	35-55 Nash
35-52 Stude	35-54 De Soto	52-53 Willys
35-54 Olds	35-54 Chrys	46-49 Kaiser

(except 98)
Deluxe Skirts: \$11.95 (reg. \$17.50) Item #2C.
Louvered Skirts \$16.95 (reg. \$22.95) Item #2C.
Std. Skirts: \$4.95 (reg. \$12.50) Item #4A.



LIFETIME OIL FILTER

Porous bronze element lasts forever! Increases engine life by removing all harmful particles. Can not soak out additives. 10-yr. guaran. Conv. Kit... \$4.95 Ppd. (most cars) Item # 5C. Full-flow... \$11.95 Ppd. (Specify) Item # 6C. Comp. Unit \$12.95 Ppd. (incl. case) Item # 7C.

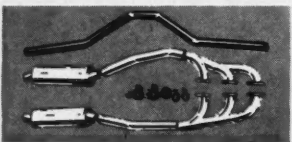


STANDARD AND DELUXE CONTINENTAL KITS

Complete with all parts for easy installation. Specify make, model, year of car, and tire size.

Std. Kit-Item # 88 .	Deluxe Kit-Item # 90 .
49-55 Ford .	52-55 Ford, Chev \$ 79.50
Chev . . . \$42.85	53-55 Pont . . . 79.50
53-55 Pont . . . 49.50	53-54 Merc . . . 89.75
1955 Olds . . . 57.50	53-55 Ply, Dodge 89.75
1955 Buick . . . 57.50	53-55 Olds . . . 99.75
1955 Merc . . . 57.50	51-55 Buick . . . 99.75
1955 Ply . . . 57.50	52-55 Line . . . 99.75
1955 Linc . . . 49.50	54-55 Cad . . . 109.75

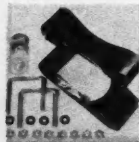
Chrome tire cover rings optional—add \$10.00. All prices 30% to 60% below regular retail price.



EXHAUST HEADER SETS

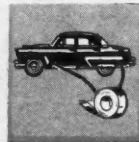
Items #108	Items #138
37-53 Ford & Merc . . . \$39.95	49-55 Linc . . . \$43.95
41-54 Chev (except conv.) 39.95	53-55 Buick V/8 . . . 43.95
Items #118	50-51 Cad . . . 43.95
54-55 Ford & Merc . . . 39.95	V/8 DUAL EXHAUST KITS available for all cars listed. Ford, Merc \$31.95—Item #148 Others (including 55 Chev) \$33.95—Item #158.
Items #128	
49-55 Olds V/8 49.95	
51-55 Stude V/8 . . . 49.95	

Add \$2.00 each for glass pack mufflers (specify). All above prices discounted 40% to 50%.



AUTO SAFETY BELT

Crash experts predict we'll all be wearing safety belts soon—and many of us will start living longer. Why wait? Approved Impact Saf-tee belts are available now. Chrome buckle, gray, blue, green, rust, black webbing. Complete kit, \$9.95 Ppd. Item #160.



CHROME METALLIC TAPE

You'll find a million uses for this handy tape. Lustrous chromium finish protects as well as beautifies. Pressure sensitive—easy to apply on any surface. Weather resistant. 1/2" wide, 40 ft. long. Item #178 Chrome Tape: \$3.45 Ppd. (Reg. \$4.00)



WIRE WHEEL DISCS

These genuine Calmar wire wheel discs give any car more dash and eye-appeal. Lustrous, durable chrome and stainless finish. Install in 30 seconds on any 15-inch wheel. Set of four, complete with special disc locks, only \$39.95 (regular price \$65.00). Item #180.

Send full amount and we pay postage on items marked Ppd.; others FOB Los Angeles. 25% deposit on COD's. All Items Money-Back Guaranteed.

ATTENTION: AUTO DISCOUNT CARD HOLDERS Don't forget to take your additional discount as per the code in item numbers above. For example, Item #1C (Sidewall kit) means you are entitled to additional discount "C" listed on your discount card when you purchase this item.

IF YOU DON'T HAVE AN AUTO DISCOUNT CARD, you are losing money! Your Auto Discount Card entitles you to additional discounts on leading products. Check the proper box on the coupon, enclose another dollar (\$1.00), and you'll receive your Discount Card and additional savings on this order as well as on future orders.

AUTO DISCOUNT CO.

6300-C8 San Fernando Rd. 1529-C8 Victory Bl.
Glendale 1, Calif. Glendale 1, Calif.

Auto Discount Co., 1529-C8 Victory Blvd., Glendale, Cal.
Please rush me the items circled:

1C 2C 3C 4A 3C 6C 7C 8E 9G 10E 11E 12E 13E 14E 15E 16D 17B 18P

My car is: Make _____ Year _____ Model _____ Trans. _____

Name _____

Address _____

City _____ Zone _____ State _____

☐ Full payment enclosed; \$ _____ (Calif. buyers add 3%)

☐ \$ _____ deposit (25%) enclosed, balance COD.

☐ Send Discount Card (\$1.00) ☐ My Discount Card is Number _____

enclosed, and give me my additional discounts on this order.

extra discount(s) on above order.

